LOOKING FORWARD

Toward a Federal Policy

PRESIDENT ROOSEVELT'S decision to take the question of federal aid to public education out of the emotional maelstrom developed by the pressure lobbying activities by some of our professional organizations into the area of objective analysis deserves the commendation and support of the teaching profession. The enlargement of the committee originally appointed to study the relations of the federal government to vocational education and the extension of its powers to explore the entire field are logical and sensible.

Public education is the concern of all of the people. A commission entrusted with the determination of a general policy should be sensibly balanced with respect to all interests. Labor, agriculture, industry, government and the teaching profession all require representation. The advisory committee on education is well balanced in this respect.

It will now be possible to consider deliberately and objectively the general principles of purpose and control that should remain dominant in American public education. Specific areas of interest and proportional support may be analyzed in light of the fundamental objectives and needs of a democratic system of schools. Certain basic policies may be established which will serve as continuing guides to Congress and the Executive in establishing with much more completeness and coherence than in the past the logical part to be assumed by the federal government.

Chicago's Plight

FOR years it has been common knowledge to the teaching profession that the Chicago public schools are so politically interwoven with the city and Cook County machines that sound professional effort is stifled.

The history of the Chicago superintendency for the past generation has been, almost without exception, the tragic tale of summary discharges or death attributable in no small measure to the heartbreaking process of being broken on the wheel of political greed and dishonesty. Whether these leaders grew up in the system or came to Chicago from other places, the terminal result was the same. Either they bent to the machine's will or were broken.

For a long time the only real and lasting opposition to this condition was the work of a small band of fighting individuals through the Chicago Federation of Teachers. Unfortunately their struggle was so complicated by fundamental salary demands that the public lost sight of the real issue. More recently a Citizens' Committee has been carrying the battle.

Now comes Milton S. Mayer, a capable Chicago newspaper reporter, who observed these conditions from an excellent vantage point for years. He became a free lance writer recently and is able to describe vividly (*The Forum,* May, 1937) the most recent developments during the depression period. His article deserves wide reading both within and outside of the teaching profession. The courageous efforts of Professors Judd, Reavis and others to bring these conditions before the people, despite the opposition of reactionary newspaper interests, also deserves more than casual recognition.

The corruption engendered by the unwholesome penetration of the political machine into the business management of the schools is nothing new. It has been obvious for years. Owing to the courage of superintendents it was possible in the past to keep the professional side free. However, the retirement, because of age, of the sturdy head of the local certification division allowed the board of education to enter even this area.

These facts are available to anyone who has the energy to seek them out. Many of them have been published from time to time and never refuted.

Our interest lies in the field of possible improvement. What are the chances for the Chicago schools to develop again the leadership and effectiveness that marked them a generation ago? What chance has the talented professional educator to give to the city and to the children the best in teaching?

Under a continuation of current conditions there is little hope. So long as the Chicago board of education is appointed by the mayor, so long as the president of the board (always a henchman of the city hall) is the actual superintendent of schools and the professionals mere title bearers, just so long will the influence of machine politics be dominant in the Chicago situation.

It is an interesting example of what happens when the schools (as many political scientists fondly urge) become just a division of civil government. To be sure, Chicago is technically an independent school district but no member is appointed to the board unless he fits into the political plans of the mayor or his political superiors. Regardless of legal statement the Chicago schools, for all practical purposes, are just a division of the civil government and do not operate in close relation to the people.

Chicago, like many another large city, suffers greatly from dearth of leadership. Many individuals who would normally be expected to be in the van long ago became disgusted with the corruption of its politics and moved their families to the small suburbs where living was better and good government could more easily be maintained. These commuters carry on their work as well as they can in the city but their real civic interests lie in these smaller communities. Here, under direct popular control, they have developed and are supporting some of the finest school systems in the country. Winnetka, Glencoe and others are examples. For Chicago's education they no longer have legal responsibility. Thus, over a period of years the corrupt politicians have been able to dig themselves in and strengthen their hold.

The only possibility for the Chicago schools to throw off their shackles is to remove, through legislative action, all municipal control over education. Schools must be completely divorced from the city political machine. The first requirement is the development of so strong a public opinion among the people that they will be willing to crusade aggressively for the independence of the schools and the welfare of their children. It means a long campaign of education through personal contact since the newspapers appear unwilling to perform their normal function with respect to education.

Parents must be informed of the ultimate effects of the current management of schools upon their children. The need for change can be effectively made. While the start may be made by the teachers as an organized profession, the fight must ultimately be carried by the organized mothers. The apathy and indifference of the men can be overcome only by aggressive and militant action on the part of the intelligent women of Chicago. The Chicago political machine is vulnerable to a direct attack by the women. It can be beaten in Chicago and at Springfield, provided a backlog of public opinion against Chicago school conditions can effectively reach the outstate legislators.

The work of the present Citizens' Committee is commendable but must be greatly extended to attain real success. It's a fine job for the Parent-Teacher Association, American Association of University Women, the Federation of Women's Clubs and League of Women Voters.

If Chicago can secure and maintain this public opinion it will be possible to secure the election of a well balanced board of education and true fiscal independence. Legal reorganization must be followed by another revolution in the executive branch and the elimination of politicians from all these positions. Despite current conditions Chicago still retains a large number of capable, sincere and intellectually honest teachers and administrators. They merely need protection from the politicians and freedom to work.

Abolish the Check-Off

TEACHERS in many sections of the country are voicing quiet but serious objections to the "check-off" system that many administrators appear to employ each fall in order to secure memberships for state and national professional organizations. They believe that the deduction of dues from their first and second pay checks is a violation of professional ethics and democratic freedom of choice. They feel that the insertion of the "willing to join" questions in their applications and "authority to deduct" clauses in contracts or in accompanying rules is an illegal assumption of power by a school district. Under current administrative practice they find it inexpedient to protest openly against these invasions into the field of private choice. Scores of teachers have asked us to present the problem to administrators.

How widespread the practice of the "check-off" for state and national organizations by superintendents, principals and even boards of education is cannot be stated accurately. We have examined many districts personally and find that, despite administrative denial, principals or other administrative officers do use coercive measures to secure memberships. We have examined a number of applications for positions and found on them the printed question: "If appointed, are you willing to join . . .?" We have also seen contracts and rules that include the "authority to deduct" clause, placing membership in state or national professional organization on the same presumptive legal basis as the payment of a state authorized institute fee.

As a matter of legal fact no board of education has the authority to make membership in extralegal interest groups a qualification for employment. It is doubtful, according to certain legal authority, whether the "authority to deduct" clause, except for legal state institute fees, can be sustained as part of a legal contract. The state can take no coercive part in forcing its agents, upon penalty of reprisal, to join a private organization.

From the professional standpoint the practice of the "check-off" employed to satisfy state and national membership drives for "100 per cent" enrollment is more than dubious. An organization built on coercion is practically worthless. It may possibly appear important to the uninformed layman. Functionally, it is of low value in professional growth.

In a recent questionnaire study made by the Educational Policies Commission of the National Education Association, 30.6 per cent of the teachers questioned

declared that "membership in the national professional organization should be voluntary. Enrollment should be absolutely free from administrative pressure — either direct or indirect." Another 60.2 per cent, while upholding voluntary membership, felt further that only "proper encouragement as one form of in-service training" was proper. Ninety-six per cent of the commission's consultants, largely administrators, voted the same way.

One of the great needs of teaching is the building of a strong profession. This development can take place only as the individual feels from within the need for accepting professional responsibility. No amount of pressure is capable of producing this condition. It would be far better for the welfare of the teaching profession, taking the long view, to work for a number of years with smaller numbers than to weaken the entire structure and retard the growth of professional spirit through administrative coercion. These ultimate professional values should be paramount to the desires of membership secretaries for a good showing.

In making plans for next September it would be good tactics to forget all coercion and 100 per centism, allowing every teacher the privilege of making up his own mind. We believe that membership totals would not suffer much and a distinct gain would accrue from elimination of sore spots that may result in real harm if allowed to fester and grow. Abolish the "check-off."

Unwise Reprisals

REPORTS from a number of school districts in large industrial centers indicate that many boards of education unwisely discharged from service in June competent teachers whose only real crime consisted in holding membership in the American Federation of Teachers, an affiliate of the American Federation of Labor. Surface reasons alleged other trivial causes but these subterfuges fooled no one. These actions by boards of education were not only illegal but unintelligent. There is little excuse for social stupidity.

Every teacher possesses legally the same civil and individual rights as any other individual. One of these rights is the privilege of making legal affiliation with a professional organization. It does not matter whether this organization is independent or affiliated with similar protective groups in other fields. The rapid growth of teachers' unions has been due directly to intolerable conditions within certain school systems. Professional existence depended on organization. Practically all of this year's incidents occurred in centers in which administrative policy of the reactionary managerial type has developed fear and uncertainty among teachers. Wishing to maintain these conditions, these boards of education apparently thought it wise to cut off heads while the protective organization was in its infancy.

If local boards of education really desire to stimulate and foster the growth of teachers' unions and stir up continuing community conflict there is no better procedure than to discharge a few competent teachers for joining. The reaction against such obvious unfairness will cause the other teachers to band together. It will finally produce a public opinion that will manifest itself in returning the shortsighted official incumbents to private life. The time has definitely passed when local boards and executives can treat professional personnel as a commodity existing at its mercy.

It would be wise procedure to reconsider these hasty, emotional actions of last month and to reinstate quietly, without attempt to dictate private actions, these individuals in their rightful positions.

Let Us Respect Property

EVERY month numerous publications from city school systems pass over our desk — house organs, annual reports, curricular material, teaching aids and supplemental textual material. Large amounts of this teaching and supplemental textual aid consist of paragraphs, pages and occasionally even chapters taken deliberately from copyrighted books, with merely a credit line. Thus one textbook miraculously becomes many.

Right to hold private property is still a basic element of our social order. Whether the system is meritorious or deserves ultimate extinction is not involved in the present consideration. These professional publications are legally the joint property of authors and publishers. They are so recognized by law. The appropriation of portions of these property interests without authority or just recompense is certainly both illegal and extremely unethical. That it is a common and widespread practice does not appear to change its character in any respect.

Publishers and authors are chary of resorting to court action, although both are entitled to damages. Nor would legal redress be of benefit to the teaching profession as a whole. Teachers and executives are well aware that the purchase of a single published copy does not include the right of ex-appropriation for general use of the material contained therein.

Suggested for Reading

WE RECOMMEND for reading a four-page essay by Bernard De Voto in the May issue of *Harper's Magazine* entitled "Liberal Equals Nnx." There are several good balance-restoring laughs in this acidly humorous dissection of an excursion by certain "liberal" educators into the field of social research. Mr. De Voto apparently believes that if education is presumptively destined to build a new world it will probably require an entirely different type of educator than our currently self-admitted salvationists.

The Editor

Public Spirit in Private

By CHARLES A. MILLER

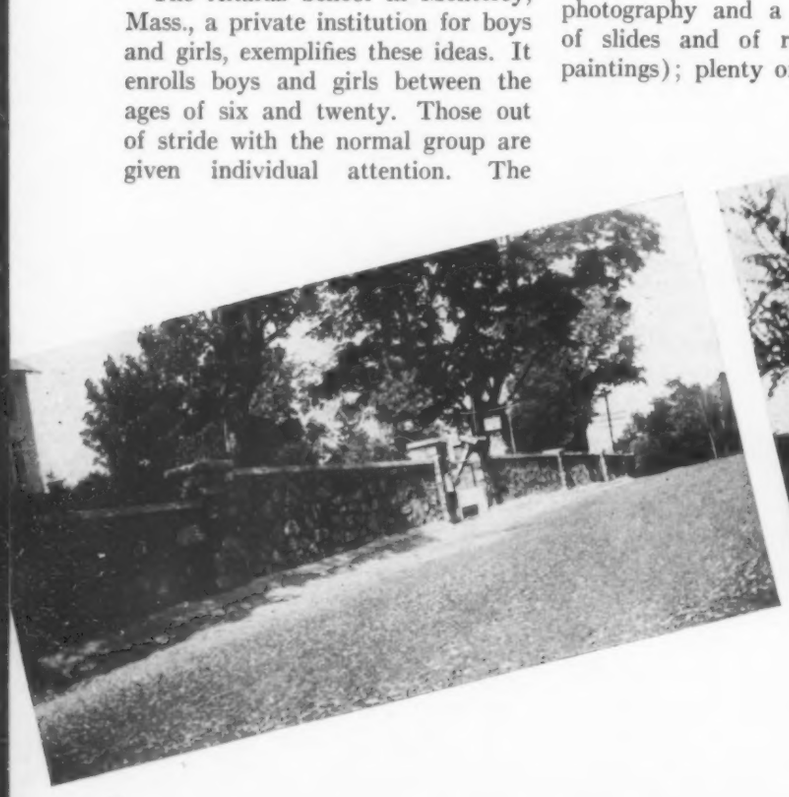
THE teaching profession is striving to make the day in school more vital in the lives of the children. The wish is often expressed that we might continue throughout the public school life of the child the same atmosphere and spirit that prevail in our kindergarten. Here the children become better socialized by association with other children; become trained in certain habits, attitudes and appreciations. They are taught how to play; how to rest; how to keep clean; how to work together. They learn consideration for others' rights and desires, courtesy, self-reliance, regularity, order, obedience and love of work.

The Altaraz School in Monterey, Mass., a private institution for boys and girls, exemplifies these ideas. It enrolls boys and girls between the ages of six and twenty. Those out of stride with the normal group are given individual attention. The school has for its especial purpose the training of children in developing all their abilities and talents, so that upon graduation they can take their places in life in the occupation for which they are best fitted. The program that makes the foregoing training possible is as follows:

I. General Education
II. Definite Occupational Training
    a. Occupations
    b. Agriculture
    c. Domestic arts
    d. Industrial arts
III. Fine Arts (music, dancing, drama, literature, cultural subjects)
IV. Recreational and Character Education
V. Civics and Community

The school has a library of 2,500 volumes; material for visual instruction (moving picture projectors and cameras, an opaque projector, several slide machines, a department for photography and a large collection of slides and of reproductions of paintings); plenty of land and farm equipment for the course in agriculture; fine facilities for general shop work; practical work in domestic arts, such as managing the kitchen, laundry and dining room of the school; excellent instruction in music, dancing, drama and the fine arts, including commercial arts.

Failure is absent in this school. There is no repeating a grade or a year's work. The idea of cooperation is reflected in the classroom, where competition is avoided by the absence of marks, rewards and penalties. The pupils work on assignments based on their needs, at their own speed or on a class project as best they can. Each child progresses at his own rate of learning, striving to finish the task at hand, eager to take the next step toward the completed goal. There is no drudgery from textbook teaching, routine drill or from the usual stiff and mechanical rules of the regular classroom.



The cabin (top of page) was built by children of Altaraz School. The stone wall (left) was constructed with the boys' help. Above, school boys are haying.

School

Main House, Altaraz School, with younger pupils, picnic bound.

Hence, even in athletics, outside competitions are not encouraged. A fine athletic field is dedicated to health and to the love of sport.

The school never separates learning from living. Doctor Altaraz believes that: "It is the character and the personality that are the important goals of education." For instance, the living room is a gathering place for the finest social feelings of the children, stories at the fireplace, games, sewing, singing, dancing and dramatic adventures. The dining room is the focus of the family, not only a place to eat but a friendly gathering place where one learns about food, current events, religion and man. Contact with the stables, the animals and with nature offers new "classrooms" with first-hand information.

Still there is no need for a complete deviation from existing standards. Academic subjects are mastered and individually taught unless group activities are more helpful. A regular curriculum following standard requirements is accepted and adapted to the individual.

A few illustrations of the procedure of teaching subject matter will help to understand the method, progressive but solid.

History is made interesting through drama, art and music. Geography becomes a creative study through illustrations, excursions, moving pictures, correspondence with children of other countries, slides, drawings, making of costumes, relief maps, foreign languages and the music, dancing and drama of other nations. The cultural life of the people of this country and other countries of the world is studied from their architecture, art, poetry and literature.

Pupils are taught that arithmetic and geometry can become vital parts of constructing a dam, doing work in the crafts shop, building a stone wall, planning and carrying out the building of a concrete tennis court, measuring a garden, surveying the school property (150 acres) or constructing a new log cabin, shop room or the school plumbing system. Under guidance of a carpenter, mason, electrician or gardener, all such projects become practical classrooms for those who show interest and ability.

English and foreign languages become the instruments of writing compositions, letters, poetry or editing the school magazine, *The Sunset Tower*, of arranging programs for entertainments, and of learning the proper technique of speech.

Hygiene is a part of everyday life. The children are daily examined for cleanliness. Body functions are checked regularly, discussed and fol-

lowed up. Records of height and weight are made monthly and the data used to best advantage by the chef in the kitchen and by the educational assistants when it comes to fatigue and factors influencing growth. Rest and relaxation are made important.

Subjects become interesting through the procedure of teaching. Each is presented as part of some aspect of community life and human living. Thus the Altaraz School becomes a school of living and an integral part of its surrounding terrain.

The social function of this school becomes obvious to every observer. The child works toward the unfolding of his own individuality, but the purpose becomes that special contribution each child is going to make to the community. The child needs the school to acquire knowledge, to develop the ability to use this knowledge in friendship and service and to seek ways to unfold his individual gifts and interests.

In general education the pupils of the Altaraz School get the cultural aspect of all subjects studied. They study things as a whole and in their relationships. The chief concern is not so much the child's intellect as his socialization. To comply with the standard requirements of quantitative information from textbooks, the pupils simply master the material required. Contacts are kept with the administrators of the public schools from the districts from which the children come originally; quarterly reports are made, individual academic reports are kept, and standard tests are administered. The records show that pupils from the Altaraz School enter college or go to higher institutions of agriculture.

The same process of harmonizing individual tendencies and interests with the social purpose of all learning is apparent in the results achieved in the other parts of the program.

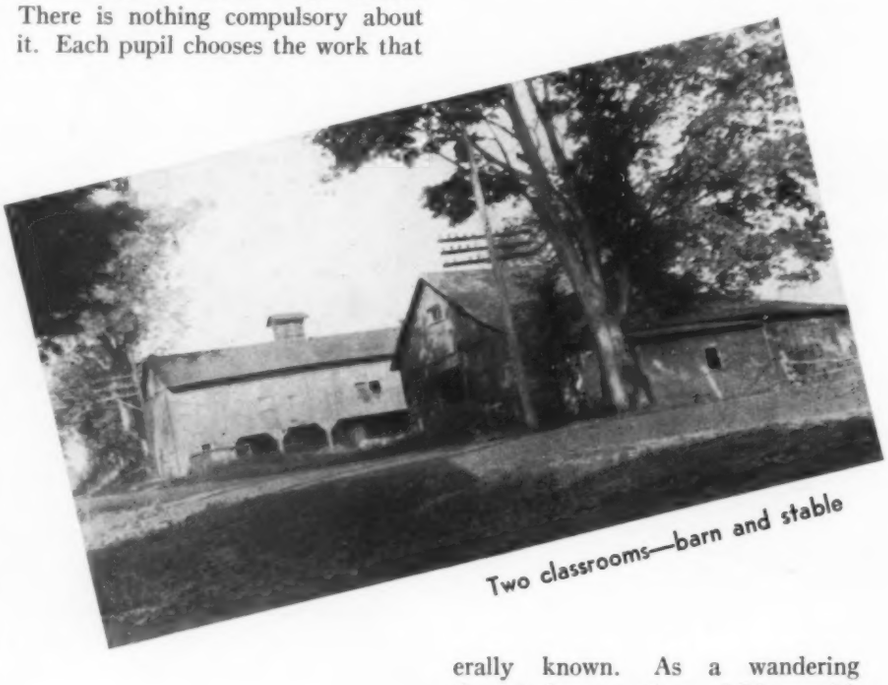
In developing occupational interests and adaptabilities, many boys and girls have been trained in domestic arts, in agricultural lines and as mechanics, carpenters, cooks, social workers, recreational leaders and gardeners. In the fine arts boys and girls have been guided toward such positions as actors, singers, musicians, commercial artists and dancers. Placement in jobs and adjustments to the existing conditions are followed up.

The most interesting element in the functioning of the Altaraz School is the influence it has upon its immediate community. To make the transition from the old school, which separates learning from real life, somewhat easier and quicker, the directors of the Altaraz School have in the last ten years made many instructive and original attempts and experiments. During these years "parentoriums," or parents' training schools, have been conducted parallel with the permanent school unit for children; many contacts have been made with officials of public schools (principals, superintendents and teachers), with business men and various professions, with civic organizations, with churches, service clubs, radio stations, newspapers and lately also with the county commissioners and the state department of education.

One such project takes place in my own school system. Doctor Altaraz directs a "hobby period" in the Lee schools. Boys and girls from grades six to twelve attend these classes. There is nothing compulsory about it. Each pupil chooses the work that interests him most. We offer classes in handiwork, arts, crafts, dance, music and drama. The children are happy in doing the things they like to do, and because of their aptitude for the work accomplish something worth while. The whole community has been invited to assist in the projects. Through exhibits, dramatic and musical recitals, dancing demonstrations and public gatherings, the interest of the whole community is kept alive.

Teachers and parents in my school district often report to me about the moving pictures shown at the Altaraz School. The school makes it part of its program to show educational pictures to the neighbors. The films mostly concern travel in foreign countries and occupations of various peoples. In connection with the movies, the music and dances, songs and costumes of the countries are shown. In collaboration with garden centers, bird sanctuary, the Audubon Society and wild flowers' associations, slides and lecture services have been obtained.

Pupils enjoy making marionettes and figurettes. In the shop a portable stage has been built and all needed properties are made. Pupils write original plays for the puppets or adapt stories and fairy tales generally known. As a wandering theatrical group these children with their marionette shows are welcomed in many villages, churches and schools.



Two classrooms—barn and stable

The school is an educational clearing house. Many persons come to the

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In the school shop a portable stage has been built and all needed properties are made. Pupils make puppets, write original plays for them and take the plays on the road — to churches and schools.

"Statues"

Puppets

Water power

The director's dream is to change this small private school into a county occupational school. Definite occupational training is now given. These boys are getting practical experience in surveying.

school for consultation. Parents, individuals, educators and social workers observe the school's activities and come for advice in vocational, educational and psychologic problems. The cultural influence of the school is remarkable. Many people attend art exhibits, performance of operas, pageants, dance recitals, garden parties and lectures given on the school property.

The school has made direct contacts with community activities in order to change antiquated methods. Discussions with the executive committee have produced results with the Housatonic Agricultural Fair. For fifty years and more the same old fair had been conducted, with the same typical run of things.

Last year's county fair showed many changes. A large special building was dedicated entirely to youth and educational projects. A tremendous pageant was given with about 300 local people actively participating. Many more changes are planned by the executive committee of the fair, all directed toward more educational features, better social standards and more local color.

The pupils frequently cooperate with neighbors and near-by institutions in activities. Excursions are made to near-by schools, churches and settlements. A convalescents' home three miles from the school is a natural center for the school to practice neighborly spirit; arranging lectures, recitals, musicales and movies is part of the mutual relationships. Similar contacts are made with libraries, children's institutions, churches, organizations, granges and clubs.

Those visiting the school grounds note constant improvement in the buildings and grounds. It takes a lot to keep grounds, barns, trees and shops in fine shape as a civic project. Since the school stands conspicuously on the state highway, every forward step is visible and becomes an example to others. It makes no difference whether it is the paint on the buildings, a new stone wall, the driveway or a new tennis court — it always has a moral influence.

In many ways the school has also brought economic benefit to the community. With so many people visiting the school, neighbors have been able to sell their products directly to the school. But the school also had many things to offer on the market — hay, flowers, vegetables, articles of arts and crafts — so there are occasions for exchange and mutual assistance.

At present the Altaraz School is working on its largest community project. It is trying to change its status from a small private school to a county occupational school. It is asking for the cooperation of federal, state, county and local authorities in establishing a new secondary school for boys and girls. The purpose of this occupational school will be to establish a natural and organic place for youth, where they can find the best way in which they can be of service. To achieve this aim the director is broadcasting twice a week from Springfield on: "What Is Youth Going to Do?" Contacts have been made with the NYA, county commissioners and state board of education.

Ninth Graders Study the Out-of-Doors

By RUTH KIRKLAND

A CLASS in Science of the Out-of-Doors has for several years been offered as a ninth grade elective at Jefferson Junior High School, in Long Beach, Calif.

After some investigation of the field of outdoor science, the class determines the fields of interest that will be explored and studied during the semester. Class interest is a prime factor in determining the time spent on each unit of work. The work is so organized that, while the class as a whole works on a core of minimum requirements, each pupil extends his own investigation into some more specialized field of the unit.

Out-of-class work and some of the class periods, after the unit is well launched, are devoted to these individual investigations. Sometimes this results in natural interest groups, sometimes in individual work.

Field trips, including half-hour neighborhood walks, tree walks in parks, bird trips to parks and shore, half-day excursions to more distant points for field study of rocks, trees, and flowers form a part of class work.

Each pupil spends part of the semester working on a term project of his own selection. This may be a further investigation of some class unit or an entirely different topic. The results of the investigation are presented in the form of a report to the class, a notebook or a collection.

Units of work that have been studied at some time during the four semesters the class has been in existence are:

1. Aids to the enjoyment of the Out-of-Doors (including development of the primary senses, outdoor library, camera, field glasses, camping equipment, hiking equipment and practices, camp menus).
2. Changing Surface of Earth.
3. Rocks and Minerals.
4. Birds (two short units, one for the fall and one for the spring).
5. Shore Life.
6. Wild Flowers.
7. Trees.
8. Forests.
9. Survey of Possibilities of Nature Exploration in California.
10. Survey of Possibilities of Nature Exploration in National Parks.

Other units include those on insects, reptiles and amphibians.

Emotional Integration

It is possible that the secondary school, dealing with the period of heightened emotions, should go to much greater lengths to bring about the integration of personality. This emotional integration of the individual can perhaps be accomplished by identifying individual longings with the common good and by revealing the harmony between apparently divergent beliefs.—From *Issues of Secondary Education*, Department of Secondary School Principals, N. E. A.

Responsible is the position of the reporter on the school paper. He can do much to sell the various courses and departments to the community. Colorful descriptions of class periods are the very best sort of publicity.

As a Publicity Medium

By AGNES SLEMONS

PUBLICITY, efficient and understanding, is available for all school systems through the medium of the school newspaper. The paper can touch vitally the life of every pupil in the system; its message is accepted without question in the homes of the school patrons; it can carry the story of the school and its ideas to other members of the community.

Nevertheless, with its unlimited possibilities for service, the school newspaper is often neglected, insufficiently financed and assigned to the English teacher as one more extracurricular activity. Because of its function in developing the pupil, it is too often forced to be second-rate and it often fails as a publicity medium of the school because of insufficient funds.

The teacher load is often too heavy for the paper to be properly supervised. The yearly cost from each pupil obviously must be kept low to ensure 100 per cent subscription sale; advertisers help, but must not be bled. A portion of the school budget, then, properly belongs to the school newspaper.

Given the proper training, time and money, the news teacher and the pupils have enormous opportunities for service to the school system.

But the paper must have its place in the school budget, the teacher must realize her problems, and the pupils theirs. An enormous responsibility rests upon the news writing class, which unquestionably must be an integral part of the school curriculum, with the pupils working under expert guidance.

Insufficient funds, a poorly trained teacher, and pupils working haphazardly as in one more extracurricular field, obviously cannot contribute to efficient school publicity. Administrators must realize that the field is too fine to be cramped. Their school is losing enormously if the publicity opportunity offered by an efficient newspaper is lost.

With an adequate publicity medium at its disposal, then, let us note some specific things the school system, through its newspaper, is often doing or failing to do.

A publication in our district makes the single sentence entry, "On Friday of each week the citizenship class studies current events." The reader gets no definite impression. Suppose a reporter were to visit the class, analyze its purposes and then report vividly some of the actual things that went on, quoting pupils themselves on controversial issues, citing the points clinched and suggesting the actual training in citizenship. A reporter's colorful description of such a class period would do much to sell this study to school patrons.

Another high school paper says, "The health classes have been making notebooks. They contain many good practice habits. Some of the notebooks are very good and show effort put forth on the part of the pupils." About every good thing is lost in this account. A live reporter turning through several notebooks might have capitalized on some of the "good practice habits," would have shown why and how the notebooks were working toward a definite objective, and would have mentioned, above everything, the names of some of the pupils who had made the better books. Here is a definite chance to interpret some of the health objectives of the school for the patrons.

Serious high school journalists soon realize the importance of their task. They can make a good story out of the chemistry experiment, the English laboratory, the grade school sand table or the bowl of tadpoles in the first grade room. Furthermore the school public is more interested in the story because their own children are doing the writing.

No school can afford to curtail this fine opportunity for service. The paper deserves a place in the budget.

Why Can't Psychology

SAMUEL ENGLE BURR Asks

DURING the summer sessions of various colleges and universities, thousands of American public school teachers study courses in psychology. During the academic years, other thousands enroll in Saturday, evening and extension courses in this field.

It is presumed that these courses in psychology will be of benefit to school pupils and their parents because they improve the professional work of the teachers. It is claimed that the knowledge of psychology which the teachers gain will help them to present school work in such ways as to fit the natural learning processes of the children.

Some of the psychology courses now being offered do have beneficial results but are of a rather general nature. Many of them have little practical value and the values they do have are not those that are held out as inducements to get teachers to register for the work. These courses in psychology need to be revised so as to offer greater practical assistance to teachers in their daily work.

Learning All the Labels

One tangible result of the present mode of studying psychology is that the school teachers learn to separate the leading psychologists into several groups. Workers in psychology differ as to their methods, their interpretation of data, their conclusions and their recommendations. They belong to various schools known by such labels as: Gestaltist, Behaviorist, Psychoanalyist, Connectionist, Existentialist and others.

A knowledge of the schools of psychology and of the major tenets of each is cultural and as such it has value. Such knowledge provides a basic framework and background for further study, but its practical value to a classroom teacher in an average public school seems small.

Other summer and extension courses approach the study of psychology from the standpoint of experiments and scientific investigations. Many teachers taking such courses are not scientists, and neither understand nor appreciate the real values of the scientific method. Some of them are impressed by a few unusual or spectacular experiments but fail to grasp their relative significance. They do not see any possible connection between white rats in maze boxes and children in classroom situations — and perhaps they are right; there may be little connection. If the teachers are to benefit significantly by psychological experimentation, it will be necessary to apply experimental findings specifically to the teachers' daily problems.

Other courses in psychology concern themselves chiefly with the physical development of the nervous system, explaining its growth and emphasizing the functions of dendrites, axones and synapses. The structure and functions of the parts of the brain and of the spinal cord are considered of great importance. The reaction times of nervous impulses are studied.

The Physiology of It

The time spent by public school teachers in learning the detailed structure of the brain, spinal cord and general nervous system does not bring a return sufficiently useful to make it worth while. Psychiatrists and psychologists need this information, but the average classroom teacher has little practical use for it.

A fourth general type of psychology course offered for public school teachers is in reality a course in objective or standardized testing procedures. Such courses include a study of the standardized testing movement as an introduction, and they include work with such tests in the fields of mental, manual and physical abilities; social and ethical qualities; personal inventories, and other measuring devices.

Within certain limits, the better courses in tests and measurements have functional values for many classroom teachers. Unfortunately, the actual effect of such courses, in many cases, is to give the teachers another tool that is used to secure regimentation in the work of the pupils rather than individualization, which should be the goal of good psychology.

Psychology is a relatively new field. Although thousands of experiments have been performed, experimental work has only begun. Hence it must be expected that some of the results that are available now will not be clear and that various workers in the field will arrive at differing conclusions. As the work in psychology proceeds, some of the present glaring inconsistencies and differences will tend to disappear.

Just at present, there is a pressing need for reinterpreting what is known in psychology so that it will have functional value for classroom teachers, principals, special supervisors and superintendents of schools.

Several distinct functions should grow out of a systematic study of psychology by those who hold professional positions in American public schools. These functions are beyond those purposes that should be met in the cases of those who plan to specialize in testing and guidance work, and they are beyond the functions that the courses should serve in the cases of those preparing for actual experimentation and research work in this field.

Is This Too Much to Expect?

The study of psychology should assist the educator in his daily contacts with other people. It should help the teacher to understand actual pupils in the classrooms and it should help the superintendent to understand teachers in the schools. These purposes are not recognized clearly

(Continued on page 27)

Courses Be Practical?

WM. CLARK TROW Replies

CRITICISMS of psychology to the effect that it "does not function" appear from time to time, but they are not always so carefully thought out and understandingly presented as they are in Superintendent Burr's plea for a practical psychology for superintendents and teachers.

His criticisms, however, seem to be directed not so much at psychology courses as they are at the teachers' educational program. The time should not be far off when a few hurried summer school courses will no longer be considered sufficient. Mastery of the social or humanistic sciences through which interwind the intricate techniques of education, touching as they do all phases of human experience and development, cannot be obtained so easily. A professional training more closely approximating that of the other professions and embodying an internship should be the objective.

Psychology Can't Cover Everything

Many of the deficiencies Superintendent Burr sees in courses of psychology would be taken care of in an adequate period of training, but not in psychology courses as such. This is particularly true with respect to his recognition of the need for teachers to consult specialists, and to determine what problems relating to children should not be handled by the school at all. Since the problems of the relationship between the functions of social organizations are so complex the teacher would be aided materially by a scholarly background in the related fields of anthropology, history, sociology, economics and political science.

There is no question but that there has been an overemphasis on the schools of psychology in recent years. And the somewhat ineffective neurologizing that has occupied so many pages of introductory textbooks has been criticized by psychologists themselves. But if teachers must know "a host of other psychological and physiological facts" to give proper instruction in reading, certainly basic biological training must have a place somewhere for the facts of vision cannot be properly taught or understood *in vacuuo,* isolated from the biological structure and functioning of which they are a part. The cure would seem to be more adequate instruction in biology and physiology.

The criticisms of learning experimentation and measurement, admitting the value of these phases of psychology for specialists, emphasize still more strongly the deficiencies of the teacher-training program, with definite implications for teacher selection. If teachers or teachers-to-be fail to see in what fundamental way the behavior of rats in a maze is related to that of children in a schoolroom—and to their own work, too, for that matter — it would seem that they would scarcely be qualified to give instruction to the young. The same troubled doubt arises if they cannot be trusted with mental tests for fear they will use them as "another tool . . . to secure regimentation in the work of the pupils."

Must Appreciate Scientific Method

Animal experimentation is recognized to be as important for psychology and education as it is for human physiology and medicine. Biological analogies are often no more close in a cell structure, for example, than they are in learning. And when are teachers going to get an understanding of the nature of the scientific method and its correlate, the scientific attitude, important as that is generally recognized to be, if they do not have at least a modicum of experience with objective measurement and experimentation!

For certain of the hopes Superintendent Burr has cherished, only to have them shattered, neither the training or intelligence of teachers nor the courses offered in the field of psychology should be held responsible. I refer to the help he believes psychology should render "the educator in his daily contacts with other people." The paragraph continues, "It should help the teacher to understand actual pupils in the classrooms, and it should help the superintendent to understand teachers in the schools." Perhaps it should also help teachers to understand superintendents, but this may be too much to expect, or perhaps it would be an outcome to be carefully avoided!

Can't Catalogue Human Beings

In any case no known body of knowledge is sufficient to provide the understanding of one's fellows one might desire to possess. The interactions of human personalities upon one another in the complexities of the social environment show too great a variety to be catalogued. However, the developments that go by the name of mental hygiene or orthopsychiatry are moving rapidly into the field of educational psychology and are giving many teachers an understanding of those with whom they deal which makes their treatment of them more satisfactory.

If, for example, a teacher wants to know what should be done with a child who steals, or lies or throws erasers, the psychologist recognizes that such conduct should be regarded not so much as an overt act calling for a definite punishment as in the older pedagogy—and in criminology —but as a symptom of some basic maladjustment. The causes responsible for the maladjustment may lie in conditions over which the school has no control. Often the social, racial or financial circumstances of the home are discovered as the cause. But, too often, the school itself is responsible. Many teachers—and superintendents, too—create the problems with which they are troubled by injudicious systems of compulsion, and ill-advised praise or blame.

This situation is recognized by Superintendent Burr in his most trenchant plea for the use of psychological knowledge to "forestall certain problems." Personally, I prefer a positive statement of the case somewhat as follows: What knowledge has psychology to offer that will make for the most wholesome individual development of pupils in a socially functioning school community? With this outlook, as it is gradually being acquired in an increasing number of progressive schools, many of the problems to be forestalled will never arise or never even be thought of.

Truancy, for example, is usually an escape from unbearable conditions; "whispering," a result of undesirable repression and a consequence of having either an overworked or a neurotic teacher; "disorder," of a program not carefully enough worked out or poorly adapted to the group concerned. Many schools would profit by a rather complete restructuring, involving curricular materials, activities, methods and controls.

But any system of organization, even a theoretically ideal one, leaves plenty of details to be taken care of, and the time to take care of them, of course, is beforehand and not after a breakdown has occurred. Here, as elsewhere, it is asking too much of a basic course in psychology to answer the multitude of questions that arise in the applied field. A basic course in chemistry or biology, for example, could not be expected to answer practical questions that might be asked by farmers, foresters, fruitgrowers, plantation owners and cattle breeders as well as by physicians and veterinarians. Considerable specialization, however, within the applied field has resulted in research work which is turned in the direction of specific practical problems.

This is the course that has been followed, too, in the case of psychology. Upon the foundation of the basic science educational psychology has developed, with various ramifications including testing and measurement, mental hygiene and, more recently, personnel and guidance, in addition to the fundamental work on learning proper. Investigators in the allied fields of sociology, psychiatry, neurology and endocrinology are continually announcing important discoveries and introducing important modifications. Many of the questions educators would like to have answered as to personality relationships and amounts of practice have not yet been answered, and perhaps never will be in their present form. About all that can be done is to call attention to these problems hoping that teachers and administrators will realize their existence, and not follow a prescribed course of action that is obviously becoming badly snarled.

School architecture is a case in point, and a number of improvements will no doubt be added to those that have already been made in this field. Near the entrance in one school laboratory there appeared in the blueprints a storeroom in which the pupils were supposedly to file their laboratory notebooks. If this plan had been followed, no great amount of imagination would be required to envision the turmoil resulting from the children's leaving their books as they depart while incoming classes are obtaining theirs.

Materials for floor, walls and fixtures, color of trim, illumination, the observation corridors, equipment and apparatus should be determined in large measure in the light of the psychological nature of the child. However, although lighting fixtures in gymnasiums should be protected, it should not be necessary to screen all lighting fixtures just because children have a tendency to throw things! There would seem to be a middle ground between having everything "shatterproof" and training children to the appurtenances of civilization.

In general, then, my reply to Superintendent Burr's indictment of psychology courses is that he seems to expect too much of them. All human problems are basically psychological, but the whole area of the biological and social sciences as well as that of the humanities and the arts have their contributions to make to man's knowledge of himself. The education of teachers should then properly include knowledge in these areas and in the applied field, educational psychology, brought to a focus by directed teaching and internship. But teaching is both a science and an art, and there be many with little ability and no talent. Upon these, as in other sciences and arts, even the best of training is wasted. Let such as these follow other pursuits.

Radio to the Rescue

HIGH school pupils average about three hours a day with the radio. It is one of their chief interests, and therefore it behooves teachers to utilize this potential motivating force. Many phases of English work can be vitalized by correlating them with radio.

Take letter writing as an example, Carlton H. Larrabee of the high school faculty, Stamford, Conn., suggests to the National Council of Teachers of English. A study of 3,000 New York City school pupils by I. L. Eisenberg disclosed that 73 per cent of them had at some time voluntarily written to a radio station. Ask your pupils to write such a letter, and they will gladly write and rewrite until their letters are perfect.

A renewed interest in composition writing will result from an assignment like this: "Listen tonight to such and such a program. Pretend you're a radio critic for a newspaper. After the drama has been given, write a review of it."

Original material for pretended radio presentation can take the form of plays, forum talks, book reviews, dialogues and news items, and many scenes from literature can be dramatized and vitalized by adaptation to broadcasting. If your school has a portable loud-speaker system, or if your pupils can borrow or even construct one, you have excellent means for motivating good speech. When they stand before a real microphone connected to a loud-speaker, they will take all the pains they would if actually broadcasting.

Even outside reading will take on a new interest if pupils are encouraged or allowed to read and report on radio books and periodicals.

Iowa Is Perplexed

By J. A. TRUE

THE Iowa code of 1935 provides for auditing the accounts of all schools by the state examiners at least once each year, the examiners at all times to be subject to the direction of the state auditor.

The law provides that "on every examination inquiry shall be made as to the financial condition and resources of the school; whether the cost price for improvement and material in said school is in excess of the cost price for like things in other schools of the state; whether the school authorities are complying with the law, and whether the accounts and reports are being accurately kept." The law further provides that the expense of this audit shall be borne by the local school district and that uniform accounting blanks must be provided by each school.

The purpose of this legislation is clear. It definitely sets up in the office of the state auditor independent authority over the school districts of the state. This has been unfortunate in Iowa owing to the fact that the uniform accounting system, which has been provided by law, has been placed in the office of the state superintendent of public instruction.

This division of the responsibility has led to a great deal of dissatisfaction among the school districts, which have tried in the first place to establish a system of uniform accounting under the direction of the state superintendent of public instruction and at the same time to meet the requirements of the state auditor's office with regard to techniques and procedures involved in this accounting system.

The examiners sent out from the state auditor's office, in carrying out instructions given them from the state auditor, have gone far beyond the ordinary functions of an audit. They have taken it upon themselves to review individual transactions of a board of education and to pass judgment upon the legality of such transactions. In doing this, they have developed a long list of transactions that they have identified as illegal.

Following are a few examples taken directly from the state auditor's report of certain school districts in Pottawattamie County.

"The minutes of September 26 show the following invoices presented, allowed and paid." An invoice for materials bought at a grocery store, total amount, $5. "Apparently this item was used for social or entertainment purposes. The law does not authorize the expenditure of school funds for such purposes."

It turns out that a group of traveling examiners from the state auditor's office can now recommend policies in education, removing much of this function from Iowa local school boards and the state department of education.

"Records show expenditures for athletic purposes amounting to $39.28, which is in violation of the Iowa code."

"The board has leased the opera house for $200. This is leased because the school has no gymnasium. The records show an expenditure of $10.35 for baseball suits." The foregoing expenditures have been in violation of the laws. The ground for this decision is that expenditures for athletic purposes are unauthorized by law.

"The board of directors passed a resolution that a school picnic should be held and that each school give $5 and if that amount was not enough for ice cream an order be drawn on the school treasury for the deficiency." The deficiency amounted to $3.15.

"This is contrary to law as we know of no place in the law that allows such bills to be paid from school funds. We base our opinion upon the principle that only such expenditures as may be authorized by law may be properly made from public funds."

Similar examples can be cited with regard to expenditure of money for various forms of physical education, musical instruments, the teaching of music, home economics, industrial arts and commercial subjects. They have ruled that no money can be expended for the transportation of school pupils to contests of various sorts. Money spent for work-permit badges required by state law has been ruled as illegal expenditure.

These and many other rulings have been made by the examiners from the state auditor's office and have been given to the presidents of boards of education in written form as a definite recommendation relative to what boards of education could or could not do with regard to these expenditures. In each case, the recommendation of the examiner has been on the basis that inasmuch as the particular expenditure is not provided for in the laws, it is illegal.

It is impossible to list in the law and to place upon the statute books of any state all of the individual and minute items of expenditures necessary in a school system, and to keep this list up to date so that it covers all activities that are authorized by the boards of education from time to time. The courts have ruled, on various occasions, that boards of education do have implied powers and, beyond that, discretionary powers which they may exercise in carrying out a program of public education.

If the state auditor's office, through these examiners, can make such recommendations as are cited above,

much of the policy-formation function in education has been removed from the local boards of education and from the state department of public instruction and placed in the hands of a group of traveling examiners who have not been trained for recommending policies in public education.

It was evidently not the intent of the legislature in passing this law to give to the examiners from the state auditor's office the power to become determiners of policy as to what may or may not be incorporated in the program of public schools. Perhaps this has come about as an interpretation of the law by the state auditor.

Since the total cost of these audits are assessed against the local school districts, it is practically impossible to find out what these audits are costing in the total. The records of the Council Bluffs schools show the following facts regarding the audit that was made in January, 1935—two auditors worked thirteen days, one receiving $7 a day; the other, $6 a day. One of the auditors worked an additional day completing the report. There was also clerical expense in typing and proofing the final report at Des Moines. The local hotel expenses for both of these auditors during the time they were in Council Bluffs doing this work were also included. The expense for auditing this one school district was $279.48.

If this is typical of the cost throughout the state, there is a serious question as to whether this type of auditing from the state auditor's office is as economical for the taxpayers of the local school districts as it would be for them to employ competent, certified public accountants to make the annual audits. There is a bill before the present legislature that would make the audit of rural school districts voluntary, not mandatory.

Every school district welcomes an annual audit of its accounts. It is important that this audit be done efficiently and with the least possible expense to the taxpayer. There is no question but what the state auditor's office can do the work thoroughly, and after several years of experience might be able to do it more economically than the local districts working separately. If, on the other hand, the state auditor's office has the power to declare every expenditure, which is not specifically provided by the law, illegal, it at once limits the power of the local school board to add any courses or activities without specific legal provision, and the final power in determining policy for the schools will be left wholly in the hands of the state auditor rather than in the hands of local boards. This phase of a state audit is and should be vigorously opposed by all citizens who believe in local control of schools.

There is also another undesirable situation that might in future years hamper the work of the schools—the possibility that such power granted to the state auditor's office might eventually come in direct conflict with the power already granted to the state superintendent of public instruction.

The whole matter would lead to a greater centralization of the control of public education in an office that was not primarily constituted for administering educational policies. Let us insist upon educational administration by educational authorities.

Open House Aids Pupil Adjustment

By CHARLES E. LEAVITT

MANY problems arise in the course of every pupil's high school life, and if these problems are to be solved happily, it is essential that the parents and school work together. With this end in view the Grosse Pointe High School, Grosse Pointe, Mich., welcomes visits from parents, and homeroom teachers call at the homes of their pupils.

The school, however, recognizes that owing to social and business duties many parents are not in a position to become acquainted with school organization and school activities through these channels and, as a partial solution to this problem, our Open House programs were instituted.

The 7B Open House is held near the close of the first marking period of each semester. The program consists of a one-hour inspection of the building and the meeting of parents and teachers followed by a forty-five-minute auditorium program given by members of the 7B grade.

The superintendent of schools, principal of the high school, assistant principal, dean of girls and seventh grade adviser are introduced at this time. The record of the parents present is checked and personal letters are sent to absent parents to ascertain the most convenient time and place for the parent-teacher interview.

Toward the end of each semester the 8A grade invites the parents of its pupils to attend Open House. Parents are invited to attend a thirty-minute program given by 8A pupils and the eighth grade advisory chairman briefly explains the possible values to be obtained from an Open House.

The auditorium program is followed by a thirty-minute homeroom advisory conference period at which time all members of homeroom groups and the parents of these pupils meet with the pupils' homeroom teacher. The homeroom teacher explains the courses offered and graduation and college entrance requirements.

This group discussion is followed by a ninety-minute individual conference period between parents and homeroom teachers. Exhibits of actual class work done in the eighth and ninth grades allow parents to judge the nature of the present 8A work and to preview the activities and work required in 9B courses. Follow-up letters are sent to absent parents so that the 9B plan of each pupil may be checked.

Once each year the senior high school holds an Open House for parents. The exhibits and program of the evening are designed to present a cross-section of the curricular and extracurricular life. It is customary to hold two regular class sessions and a homeroom period on this occasion and to give every extracurricular activity some representation.

Some of the pupils in the Bayview School for flood refugees. The fourth from the left in the front row is Elbert Burtcher, author of the letter reproduced on the next page.

"When That Water Got Us"

By THEODORE R. WRIGHT

DURING February and March, the school systems of Birmingham, Bessemer, Fairfield and of Jefferson County, Ala., were faced with an unusual situation. Almost overnight a new community, consisting of 3,000 inhabitants, including more than 800 children of school age, came into being.

None of these people were Alabama citizens. While there is a strict compulsory education law in Alabama, it could not be invoked in this case because none of these people were permanent residents. Hence, any school attendance on the part of the children would necessarily be purely voluntary and no penalties could be imposed for absence. Unless the school made itself so attractive to the children that they wanted to attend, it would be without any dependable class organization.

About a year ago a corporation that had been operating in the Birmingham district abandoned an entire village at Bayview Mines about eighteen miles from Birmingham. When the American Red Cross began to seek housing facilities for flood refugees from the Arkansas lowlands they recognized the advantages of Bayview as one point to concentrate these unfortunate people. There were enough houses in good condition to accommodate a population of about 5,000, together with sanitary and heating facilities, commissaries, schools and administrative offices. At the peak over 3,000 people came.

After the refugees had been housed, provided with clothing and arrangements made for feeding and medical care, the Red Cross recognized the need for some sort of schooling for the numerous children in the camp. They were swarming the streets in constant danger from trucks and ambulances.

The officers in charge decided to appeal to the near-by communities to establish a school. This resulted in a conference which included Doctor Crane, Colonel Webb, Mrs. Landgrebe, Dr. C. B. Glenn, superintendent, Dr. L. F. Banks, assistant superintendent of the Birmingham public schools; J. C. Orr, superintendent of the Bessemer public schools, and B. B. Baker, superintendent of the Jefferson County

schools. At this conference these school officials agreed to help the cause to the extent of lending desks and other idle equipment and the part-time services of some members of their organization; they were not to give any money.

I was fortunate enough to draw the assignment as principal, since my school is one of the smaller ones in the Birmingham system. Doctor Glenn, while talking with me before I started the work, said, "I want you to go out to Bayview and set up a school, but we cannot let you have a single penny for that purpose, since the town is miles outside of our school district. As I see it, there is one really worth while thing that we can do for these children. Most of them have come from areas in which they either had no school at all, or attended one which was far from ideal. You and your teachers ought to try to give them a glimpse of the new school in the finest sense of the word. Let them get a vision of what the ideal school should be, so that when they go back to their own homes they will have the desire and will insist on seeing it realized for better schools and a richer life."

In the camp were two school buildings, one for white and the other for colored children. Since the white school had been taken over for use as a hospital, we were limited to the use of the Negro school building. It was well built, roomy and well lighted, with five classrooms and a large auditorium. In addition, we were promised as many of the adjacent cottages as we cared to use.

The only way in which we could accommodate this large group of pupils with such existing facilities and lack of equipment was by a modified form of platoon school organization. As an offset in special subjects, while parallel sections were in homeroom, we decided to offer auditorium, play, home economics, manual training and nature study.

Because none of the adjacent school systems could lawfully staff this school from their own personnel, permission was granted from Washington to use teachers available on local PWA rolls. However, teachers on government payrolls were permitted to work only forty hours during any two weeks' period. Since time had to be allowed them for getting to and from Bayview it was not possible properly to staff the school with one set of teachers. Therefore, one group had to be employed for the morning, and another for the afternoon.

The Birmingham, Bessemer, Fairfield and Jefferson County school systems collected in their warehouses all available desks. These desks were hauled to the camp in National Guard trucks. With the Red Cross furnishing the lumber, workmen in WPA shops in Birmingham and Jefferson County warehouses made benches for auditorium use. A number of men in the camp under the direction of officers of the National Guard cleaned out and disinfected the school building and cottages and installed the desks.

A real problem presented itself as to how to obtain pencils, tablets and books, without any funds. Eight hundred pencils, 800 rulers and 1,600 tablets were donated as advertising by a commercial corporation.

The principals of the Birmingham schools asked their pupils to collect all old textbooks in their homes, no matter what type or grade, and to donate these books to the school. The results were simply astounding. Books came in by the hundreds and, though some of them would easily have qualified as old and rare volumes, they were all usable for our purpose.

While these people from the lowlands were friendly and social, we realized that in order to get voluntary attendance on the part of these pupils their parents must have a favorable attitude toward the school. So we met with a group of refugees on Tuesday afternoon, February 16.

Though roughly dressed and unshaven, these men were strong characters and well chosen. The desire to open a school at the camp and the need of the children for improving themselves during their stay at Bayview were carefully explained. I asked them to express frankly their own attitude toward such a school and whether they would help in working up a favorable attitude on the part of the people. To a man they expressed themselves as highly favorable and readily agreed to divide the camp into sections and to make house-to-house calls that day and the next, telling the people that school would open and urging them to send their children.

Thursday afternoon a group of the teachers and I went to the schoolhouse, threw open the doors and waited for the children. When the hour for the opening arrived, not a soul was actually in the school, but at a number of points within a few hundred feet we could see clusters of children with their parents eyeing the school with a doubtful attitude but keeping themselves in a strategic position for a quick retreat. Finally a few of the more venturesome drew near and we gave them the warmest welcome possible. When the others saw that nothing happened to the first they began to come in swarms.

In order to make a rough classification, the teachers of the several grades stood in different parts of the auditorium while several of us were at the doors and asked each child if

March 4, 1937
Osceola
Ark

Dear teacher thought I would let you know we got home ok. the water is all gone and the ground is dry. I thank you for the toys you gave me. I got home with that cart I made mama thinks it's grand I will look for a long letter from you soon how is Bay View getting a long has all the people left thire yet. so I close hoping to hear from you soon

Elbert Burtcher
Osceola Ark

When this you see
Remember me
you can see this
When you cant see me

Elbert Burtcher
Osceola
Ark

he knew to what grade he belonged. We would then indicate the proper teacher for that grade.

After this first rough classification we realized that we would be compelled to have a finer one. For instance, in our first grade we had pupils ranging from six to nineteen years of age, many of whom had never been to school before. By the application of a few simple reading tests we were able to obtain a fairly good grouping.

In some manner a rumor had spread abroad throughout the camp that we were going to keep the children until the summer, but were going to send the parents back to Arkansas. A great many parents were alarmed and distressed over such a prospect and refused to let their children enroll. However, with the aid of a community loud-speaker, we were able to reassure them.

The life of the school was short but chock-full of interest. I am not certain whether we were educating the children or they us. It certainly was interesting to hear them tell of their experiences in the flood. Many of them had waded out of their homes in water waist deep with the temperature standing at 22° F. When referring to it they always said, "when that water got us."

Within a few weeks the flood waters subsided and the Red Cross decided to move these people back to Arkansas in time for them to make their crops. In a few short days our lively school again became an empty building in a deserted village.

Can't Psychology Courses Be Practical?

(Continued from page 20)

enough in most of the psychology courses being offered.

The determination of suitable objectives, aims and goals in education is largely philosophical. The determination of methods and procedures to be used in reaching them should be psychological. Psychology courses for teachers should deal more specifically with these problems.

In the present day civilization, reading is an essential tool. Hence there is little or no argument as to the necessity for teaching children how to read, but the methods used should be based upon psychological truths. Teachers should know that children are ready to start their reading work at a mental age of about six years. They should know that the method that starts with the recognition of meaningful groups of words secures better results over a period of years than does the alphabet method of teaching. They should understand the nature of eye movements as they occur when a child reads and a host of other psychological and physiological facts.

There are times when review and drill are needed in all school work. Teachers should be familiar with the psychological research results regarding these topics. They should know how to gauge the proper length of a drill period and how frequently such periods should recur. They should know the relative values of whole and part learning and when one or the other should be used. Knowledge of the attention span for various age and ability groups of children should be of such character as to function in the classroom.

One result of a teacher's study of psychology should be knowledge of when to issue orders and when to rely upon the initiative and originality of children, when personal experiences are required for the best learning and when vicarious experiences can be used successfully, how much failure stimulates further effort and when discouragement enters in.

Another purpose that psychology should serve is in helping the educator to forestall certain problems and keep them from disturbing public school work. From the time when the floor plans of a new school building are being prepared and from the time that a new curricular change is suggested for trial, this purpose should operate.

The principal or supervisor can use practical psychology in making out an assignment schedule for the teachers. If the administrative officer is able to judge the personalities of the teachers correctly, he will be able to assign them those activities in which they should be able to register the greatest degree of success and to avoid giving them assignments for which they are not fitted.

Many daily difficulties that confront school administrators might be avoided if the facts of psychology were available in a more readily useful way. The same statement applies with equal force concerning the problems that confront school teachers when they are in classrooms and when they are conducting extra-curricular activities.

It should not be implied that psychology should be asked to provide ways and means for precluding all problems. Many problems are needed in school work. Some of the best learning situations grow out of attempts to solve practical problems.

Psychology courses should show teachers how to deal directly with some problems, how to forestall others that have no compensating values and how to recognize other problems as requiring the need for assistance from supervisory and administrative officers. Similarly principals, supervisors and superintendents should learn when to call upon the members of the board of education and such staff officers as the architect, the physician and the lawyer for expert advice and assistance. Teachers should understand that it is an indication of strength rather than of weakness when expert advice is sought in a serious emergency.

Teachers, principals and superintendents should be able to recognize, from their psychological knowledge, what problems should not be handled by the public school personnel at all. There are problems that concern school children that are handled best by parents, church officials, police officers, juvenile courts, relief agencies and other individuals or organizations. The findings of psychology regarding human nature should be made practical enough to indicate to school people the times and the occasions when the public would misunderstand and resent the attempts of teachers to inject themselves into such situations.

"Carry-Over" Sports at Culver

By C. H. DAYHUFF, Jr.

REALIZING that many athletes find themselves without any talent for activities in which they can indulge after their school and college days are over, Culver Military Academy has developed a system of "carry-over" sports instruction which is required of all first and second-year men enrolling at the school.

It has long been felt that a great weakness in most physical training and athletic programs is that they do not provide for training in the "carry-over" sports in which both the average athlete and the boy with no leaning toward physical activity may participate. The result is that in later years they have no beneficial hobby to provide healthful recreation and to keep down the middle-age waistline.

There are too many drop-offs in sports. The football star, unless he goes into professional ball, has not time or the ability to keep up in his specialty after college days. With a background of "carry-over" activities, he can drift quickly and easily into some sport such as golf, squash, badminton or any of the other games when he lays aside his major sports togs at graduation.

Under the Culver program, adopted this last year for the first time, all first and second year men are divided into various groups and assigned to a particular type of instruction two afternoons a week during the regular drill period.

From November 15 to April 15, the men receive regular instruction as follows:

First year: posture training, calisthenics, gymnasium, apparatus work, tumbling, swimming, boxing and horseback riding for artillery and cavalry cadets.

Second year: badminton, wrestling, golf, fencing, diving, squash, life-saving and rowing.

Each cadet is given a prescribed number of hours of instruction in each sport and is rewarded for his qualification. The coaching of the sports, as in the extensive intramural program at Culver, is handled by the athletic department and highly qualified members of the academic faculty.

Designed to interfere in no way with the extensive varsity and intramural set-up, the new plan serves to give each boy basic instruction in varied sports so that he may make a selection in which to specialize. Every effort is made to get those boys whose interests lie mainly in major sports, such as baseball, football and basketball, to take up at least one "carry-over" activity which they may enjoy as they grow older.

Each cadet, satisfactorily qualifying in each sport will be rated either as Good, Proficient or Excellent, and points leading to a suitable gold, silver or bronze insignia will be the reward for proficiency in required sports.

This award will be an incentive to the boy who is unable to win a varsity or a company letter. In most cases such a boy, realizing that he is not capable of making a team, feels that there is no particular use in trying, and either drifts aimlessly from one play activity to another without acquiring proficiency in any or attempts to dodge the physical activity altogether.

Even the boy who has not learned to play before coming to Culver has a chance to qualify, for at the end of the period of instruction one or two days will be set aside as "athletic testing day." At this time those cadets who have not shown proficiency in one or more of the sports will be given an opportunity to pass a test and thus be eligible for a medal. Whether he passes or not, the boy at least has had some fundamental training in a sport that he can use long after he is out in the world.

Definite periods of the day are set aside for relaxation and athletics. At present Culver has varsity and intramural (company) teams in the following sports:

Varsity	*Intramural*
Football	Football
Basketball	Basketball
Track — indoor, outdoor	Track — indoor, outdoor
Baseball	Baseball
Swimming	Soccer
Crew	Swimming
Boxing	Hockey
Polo	Tennis
Cross Country	Golf
Golf	Rifle
Rifle	Squash
	Badminton
	Bowling
	Table Tennis

Full utilization is being made of Culver's exceptional equipment of 1,100 acres of campus; six football fields; two soccer fields; a sporty golf course; sixteen clay tennis courts, where the national junior and boys' championships are held each summer; two baseball diamonds; a thirty-eight target indoor range; modern skeet course; nine eight-oared shells and barges, and almost 100,000 feet of playing space under cover including the recreation building, riding hall, game rooms, natatorium and gymnasium.

This new system is by no means perfect nor it is complete, but represents the beginning of what is believed to be a pioneer step in secondary education.

Nonathletes as well as athletes at Culver Military Academy develop proficiency in one or more sports. Under a new plan all first and second-year men are given basic instruction in each sport so that a cadet may decide on one sport in which to specialize. On the opposite page are pictured some of these activities that can be carried over into adult life.

Groups of teachers at a Los Angeles County Institute are learning how to make clay bowls by the mold method and how to make stringed marionettes.

Teachers Like

By A. R. CLIFTON

ALTHOUGH teacher training institutions are adapting their courses of study and their instructional procedures to meet the needs of teachers in modern schools more adequately, there is abundant proof of need of training while in service. Perhaps it is better to say there is a need to continue the education of teachers after they have left the training institutions and are confronted with the practical problems they meet when they are held responsible for classroom performance.

To meet this situation school administrators have resorted to many different expedients — among them the visitation of supervisors, group and individual conferences, general teachers' meetings, administrative bulletins on instruction and classroom procedures, encouragement of summer school attendance, and curriculum building committees in which teachers of all levels participate.

Teacher institutes—another means of setting standards and improving instruction — have been made use of for many years, their success depending largely upon the character of the programs presented. If the programs were prepared so as to meet the interests and needs of teachers on the job, they yielded satisfactory professional returns; if they were too general and too indefinite, as they often have been in the past, they were not worth their cost in time, in energy or in money.

In the Los Angeles County school organization, an inadequate professional staff for the last five years, resulting from a restricted budget during the depression period, made it necessary to provide some means of carrying on a training service for teachers that would cost less than the salaries of trained experts employed throughout the school year.

In analyzing the various means available for such service, it seemed that a well planned institute presented at the beginning of the year could set the standards and furnish the inspiration and incentives for more efficient work during the balance of the year, better than any other means open to us for the amount of money expended.

The 4,200 teachers for whom our program is prepared come from various sizes and types of educational units — from one-room schools in the mountains and desert to chartered cities with excellent educational systems from the kindergarten through the junior college levels. There are so many interests involved and such a wide opportunity for service in this spread of teaching situations that there is indeed a challenge to the superintendent and to the committee members assisting him in the program. In general, however, the challenges fall into five classifications:

1. Teachers must have zest and enthusiasm for their professional work and an inspiration that will help them meet their problems with courage and with optimism.

2. They must continually widen their cultural backgrounds in order

Los Angeles County teachers are finding out (left) how their forebears made trenchers and (above) how colonists made their pewter bowls.

This Institute

TRAINING IN SERVICE

that they may have a breadth and depth of information for the proper interpretation of, and reaction to, school situations as they present themselves.

3. They must have more real life experience and a better understanding of current problems in the fields of economics, industry, commerce and politics.

4. They must keep abreast of the new movements in education and be familiar with the best practices, new or old.

5. They must know how to use instructional materials and equipment and be thoroughly familiar with successful techniques in their own fields.

The first two challenges can be met through the kinds of institute programs that have been provided in the past, that is, through inspirational and informative lectures, concerts, travelogues, dramatic interpretations and so forth. The third, fourth and fifth challenges demand a change from the traditional institute to one more practical, one that gets away from the lecture platform and into the library, the laboratory, the workshop and the great outdoors.

Teachers can no longer confine their thinking to the four walls of the classroom if they are to measure up to the responsibilities that are theirs, and if they are to meet the expectations of their intelligent patrons who want their children to have an education for tomorrow.

Young people must have richer exposures to life situations if they are to make satisfactory adjustments to the world in which they live and play their parts. They must know more of the way people live and earn and achieve in addition to acquiring the necessary skills which are as important as they ever were. Such experiences cannot be provided by teachers whose knowledge and training are too academic or too meager.

In Los Angeles County we found that many of our most promising teachers, from the standpoint of personality and traditional preparation, knew little of "how the other half lives." Many had spent their lives going to s c h o o l — kindergarten through university — and then into the classroom, and had no experiences in homemaking, in business, in trades, on the farm, in the factories or in the shops. Office, industrial and commercial contacts were altogether foreign to the great majority of our teachers, and they were so far removed from the outside life of pupils and their parents that too often there was a break because they did not understand one another.

Our institute committee set for itself the task of remedying this situation, of finding ways and means of multiplying and broadening the experiences of teachers, of clarifying controversial issues both inside and outside school circles, and of providing clear and definite practices that might be put to work successfully because they were practical.

The general plan and the scope of

our 1936 institute program may be stated briefly as follows:

1. Lectures dealing with the problems that now face the American people and the educational implications growing out of them.

2. Visits to industrial and commercial plants, in order that business organization and production methods may be part of the teachers' experiences — steel mills, meat and fruit packing plants, glass factories, oil fields, petroleum refining plants, clay products factories, the harbor to study shipping facilities and commerce, and so on.

3. Visits to civic and governmental offices, that teachers may know of the work of these institutions and the vital part they play in the life of our county — juvenile hall, county hospital, jail, superior court, federal court, psychopathic court, orthopedic hospital and similar institutions.

4. General cultural and informational lectures.

5. Group meetings in which educational methods and practices are discussed in an intimate and informal way by panel or symposium groups.

6. Visits to schools in which outstanding work is being done and in which successful demonstrations of the best modern methods could be observed.

7. Laboratory workshop meetings in which teachers may learn through personal experiences how to handle materials and do things that children would profit by doing, such as making books and pottery, working in leather, constructing miniature airplanes, trucks, ships and silos, before attempting the activities in the classroom.

There were 157 meetings provided, convening in late afternoons, evenings and Saturday mornings, and distributed over a two-month period from October 17 to December 12. In accordance with California law, each teacher is required to attend a minimum of six sessions. A compilation of attendance figures of individual teachers shows that not the minimum six sessions, but ten, twelve, fourteen and more were selected from the program offerings by a large percentage of our teachers. This is most encouraging to our professional staff and to the administrators responsible for the success of the educational program in the various individual districts.

It is apparent that most of our instructors no longer view the institute as an administrative burden as they did prior to the introduction of our new plan with its large and varied opportunities for professional growth. Institute attendance has now become a pleasure to all of our teachers who are interested in improving their services to the communities which employ them.

There has been a marked improvement in classroom achievement as a result of renewed enthusiasm on the part of teachers. A finer attitude toward children has developed along with the realization that their profession is one of the most satisfying.

Treating Athletic Injuries

HIGH school athletic injuries are frequently more serious than those that occur among college students, for to the awkward green player or the one who is off his guard or loafing the more serious accidents take place.

A physician should be in full control of the physical side of the team, as the coach is in charge of the athletic side, according to Dr. Marcus H. Hobart, who reviews his twelve years' experience in handling athletic injuries at Northwestern University in the *Journal of the American Medical Association*.

All athletes should have a physical examination at least each season. The heart, pulse and lungs should be checked over, examination made for hernias and any other abnormalities noted. Each player should have had a recent successful vaccination against smallpox.

Players, trainers and coaches should get it into their heads that they will save time and benefit the team by getting immediate help from the doctor in case of injuries. It is thus possible to save many days of disability and actually get and keep boys in play, or ready for important games.

The knee gets most of the injuries in school sports, probably because of the careful protection given ankles, allowing the knee to suffer in consequence. It is important that a knee injury be diagnosed correctly and the difference between a contusion, a sprain, semilunar cartilage injury and a fracture determined through x-ray examination.

For fractures, Doctor Hobart recommends emergency splinting, reduction at a hospital with x-ray equipment and application of a cast. A splint is too easily removed, and the general rule, says the Northwestern physician, is to use a cast for children, athletes, doctors and idiots.

"Contusions and bumps are usually treated first with ice and later with heat. Sometimes a 'hot pack' is applied overnight. Massage and diathermy are used in every case. This gets the muscles toned up, so that when the bone is healed function will be present without delay."

Sprains in the joints Doctor Hobart first packs in ice. An ankle is strapped with adhesive tape with pressure on the tender sprained spot. For the knee adhesive strapping lengthwise and the use of crisgesic balm tend to keep the swelling down. Later contrast baths, diathermy and massage are used.

Sutures about the face are removed in from three to five days to prevent stitch scars. Bandages are not used on the face during games as they incite opponent players of certain types to tear them off. During the game a collodion dressing is used, which is removed immediately after.

All scratches and cuts are dressed as soon as possible with an antiseptic dressing, after cleansing. Inflammations require hot boric acid dressings or hospitalization, if continued.

In 558 injuries that occurred to Northwestern University athletes during a five-year period, sprains led all types of injuries. There were 167 sprains, 127 contusions and concussions, 109 fractures, 71 cartilage injuries, 56 lacerations, 24 dislocations.

Innovations in Industrial Arts

Where Haste May Bring Costly Waste

By VERNE C. FRYKLUND

SCHOOL administrators are becoming increasingly interested in the newer concepts of industrial arts education. There are seeming extremes to the interpretations of these concepts, and there are varying emphases in practice. Serious problems may arise for those who, in their desire to better educational opportunity, fail to guard their curriculums and budgets against too hasty innovation. It is a matter of practical concern and the outcomes must justify the costs.

A school administrator, in interviewing prospective teachers of industrial arts, inquired of them whether or not they believed it was necessary to teach the techniques of performance in manipulative and machine work. Each applicant who responded in the affrmative was informed that a person was wanted who saw little need for teaching shop fundamentals. It was unimportant if he lacked training in basic manipulative and machine skills. However, the person selected would be required to integrate shop work with art. He would be expected to develop the new type of industrial arts that would teach the pupils to appreciate design and make them better consumers of goods. There would be study of design which would be applied to things that the boys made.

Trend Toward Art

Under such conditions there is little doubt that there would be expensive equipment misused and materials wasted, and little of educational value gained in return for large expenditures. Integration is desirable, but at the same time there must be instruction in manipulative fundamentals and machine operation.

One of the newer concepts, which offers difficulty of interpretation, seems to indicate movement from the idea of craftsmanship to that of art. Greater emphasis on art is wholesome, inasmuch as craftsmanship and art should be coincidental, as is shown by the history of the creation of the great masterpieces of architecture, sculpture and painting. The works of Michelangelo, Leonardo da Vinci, and others of their time were the achievements of craftsmen. These men were, primarily, goldsmiths as well as physicians, apothecaries and scientists. The goldsmith worked in gold, silver, bronze, marble, wood and clay. He cast, hammered, chiseled, filed, sawed and carved. His work might involve a mingling of metal and textile, as in brocade, or of stone and painting, as in mosaic and jewel-setting. He was concerned with form and color, composition, perspective, harmony and proportion, taste and beauty as are those who design and produce in industry and commerce today. The creators of the great masterpieces of architecture, sculpture, jewelry and pottery were the industrial craftsmen of their day. Thus both craftsmanship and art were practically synonymous in meaning in the creation of these great classics.

Art requires craftsmanship, and craftsmanship requires art. Design and execution combine to form craftsmanship; they combine to form art. The art of today, as in history, is manifest in all things and in some way. Unfortunately, art is separated from craftsmanship by many who regard it as something of concern to possibly an exclusive few. On the contrary, art is the making of all sorts of things, in the fittest possible way.

Good Design Is Desirable

One of the aims of modern industrial arts calls for development of "appreciation of good workmanship and design in industrial products."

The nature of industrial arts is such that equipment, tools and materials are available by means of which there can be changing and shaping of materials to conform to one's needs. In making over such materials there are certain fundamentals in manipulation and machine operation that should be taught and put into practice; merely knowing how and discussion will not suffice. There must be study and comparison of suitability of materials in design, structure and finish. There must be application of rules of proportion, balance and color harmony in changing the materials to a particular need; there must be art and craftsmanship in practice. Shoddy workmanship would give doubtful appreciation; it would make application of design impossible because it is apparent that a well designed article in completion requires certain dimensions, contours and structure properly executed.

A Current Delusion

Inadequate study of changing concepts in modern industrial arts unfortunately has led to practices that may be harmful to all education as well as to industrial arts. To the public, what happens in any classroom reflects on the school. There is a misconception that craftsmanship means joint making and that skillful performance is something undesirable in high school industrial arts. This delusion has crept into teacher-training philosophy and consequently today there is a shortage of well prepared teachers in industrial arts. This has led to much school keeping instead of school teaching in industrial work at the secondary school level.

Skillful performances among pupils in industrial arts in the secondary school are comparable to such per-

formances in any other creative effort of that level, while skillful performances among industrial arts teachers should be more exclusive, of higher type. Ability to perform in the lower school manifests itself according to individual differences in ability to achieve. Teachers in training are assumed to be select and therefore there should be definite exactions and fixed patterns of achievement. Information alone, because of individual differences, may transcend manipulative and machine work in importance for many pupils of the secondary school. But in training industrial teachers, transcendency of subject matter should not exist. Teachers should be highly trained in all phases of their work.

It is not to be assumed that in the secondary school one must force young people without aptitude to do the impossible. There should be balance. There may be variation here and variation there in emphasis on instruction according to individual differences, but there should not be discrimination in selection of content in an activity that in its nature requires both manipulation and information in varying degrees. Ideals of attainment must be held before a given class even though all pupils may not reach a particular ideal. These ideals may involve performances in processes or possession of knowledges.

The teacher, therefore, must be well trained in design and execution; he must be a craftsman—an artist. He should be trained to demonstrate with an ease and an accuracy that would attract the learners in admiration and emulation of him. Seeing a good teacher perform, even though unable to emulate him in full, is desirable knowledge for the observer. We are more than ever living in a world of processes and the boy who attempts development of skillful performance, even though unsuccessful in attainment, is acquiring valuable information regarding industry.

Lest there be danger of misinterpretation, the reference to manipulation in industrial arts in this article is not an attempt to revive the undesirable practice of the old manual training period, which practice assumed that all pupils in a class had to attain perfection in the making of a series of exercises before being permitted to work on a project of particular need and interest. Although some industrial-arts enthusiasts allude to this as a contemporary problem, even remote hamlets are quite free of such practices. There is no contemporary industrial arts philosophy embracing such beliefs.

Administrators of the college and the secondary school should not cast aside consideration of educational values as well as costs by too hastily embracing new beliefs. There should be scrutiny beyond the headlines. There should be understanding of the meaning and intent of the various more or less similar aims of industrial arts in schools of less than college level.

The teachers should understand and be responsible for the functioning aspects of aims, and, moreover, it is also intended that they should be trained toward craftsmanship in shop performance. There must be ideals established in both the manipulative and informational aspects of the shop. This holds true in efforts at integration and in traditional presentation.

The higher institution, therefore, has important responsibilities in developing industrial arts teachers in manipulative and machine skills, in abilities in design, in training them in the general understanding of educational programs and in making certain that they have acquired a functioning knowledge of educational psychology in order that they may form proper judgments in administering their work in sympathetic and tolerant fashion.

There must be full measure of returns in proportion to costs in industrial arts, just as in other educational areas. Waste in the shops is far more costly and tangible than it is in academic classes. Hasty innovation without thorough study of concepts and careful planning is certain to lead to waste in materials and equipment and disillusionment in learning. Adjustments to change are desirable, but let us make any adjustments worth while by ensuring careful interpretation of the concepts that guide us in making the adjustments.

Visit to a Sight-Saving Room

By JEANNETTE RIEFLING

BY MEANS of the sight-saving class, visually handicapped pupils in the Roosevelt High School, St. Louis, are enabled to complete the four years of high school, as well as the elementary school, without further injury to their eyes. In most cases, these pupils would otherwise be denied a regular school education. They recite with regular classes, but all study periods are spent in the sight-saving room.

The room in which sight-saving is done is especially selected, decorated, furnished and equipped. The lighting, both natural and artificial, is sufficient for the use of defective eyes; glare, both direct and reflected, is eliminated as far as is possible. Windows are provided with two buff, translucent shades, one pulling up and the other down. All woodwork and furniture are in neutral shade and dull finish. Walls and ceiling are a light color, usually buff. Reading racks hold books at proper reading angles.

Books are either in large print or typed in large type by means of especially equipped typewriters. Maps, diagrams and charts are enlarged, well defined and without detail. Special pens and pencils are used.

Much of the material is put in shape for the pupil to do his own work. But this is insufficient to prevent eyestrain. Volunteer helpers from the regular student body come to the sight-saving room to read to pupils, to type, to reproduce maps and charts, and to do any other work that will make for efficient operation of the room. For this they receive no pay. Often they do not receive any kind of service credit.

Teachers must make adjustments and yet be sensibly sympathetic.

Letter From a Lobbyist

By FREDERICK J. MOFFITT

The State Capitol
Late Spring, 1937

MY DEAR EDITOR:

The state legislature, as usual, did not adjourn on the schedule planned. I had hoped to be back with my little "kiddies" at school long before this with the feeling that the legislation for this year would need no more educational guidance.

But one never knows the permutations of a legislator's mind and it looks as if I am stuck in the state capitol for some time to come, what with the important bill that has just been presented, which will declare a week's vacation to celebrate "Lo-the-poor-Indian" Day. Unfortunately, the new holiday will fall on the day already given over to the celebration of Children-Dunk-a-Doughnut Day, which became law at the behest of the Master Bakers' Association last session. This is causing some worry.

There has been considerable trouble of a statistical nature in the legislature this year. In the first place, Education Bill No. 42 (the troublesome McGillicuddy-Sapolio-Bottoms-up bill), which aims to increase the number of teaching days to 375 a year, has run smack into Educational Bill No. 17, which provides an extra two-day holiday for the celebration of How's-Your-Old-Man Week. The latter bill has the strong support of the Society for Furthering the Future of Fathers.

The attitude of the governor has been irritating this year. It is rumored that there has been considerable pressure put upon His Excellency by the rural sections. The hinterlands feel that their bill, which would make an extra holiday in honor of "Drink More Apple Juice Week," has been crushed into pulp by a lawless element which insists that the title of the bill be changed to "Drink More Fire-Water."

Of course this change will slightly emasculate the original meaning of the bill, but the proposal has aroused the enthusiasm of various groups who feel there ought to be a law about the fire hazards in education. This faction is filled with joy at any change in the law which will fire the enthusiasm of the future would-be firemen.

The matter of school holidays, however, is not troubling the legislature so much this year as usual. Practically every patriotic, religious and civic organization has been honored with holidays and there are not many new ones that can be thought up at the present time.

The legislature has, therefore, started to monkey more and more with the good old-fashioned curriculum which has descended to us from the founding fathers. Of course, you and I both realize that the school curriculum in this state is pretty dusty in places and that a good dry cleaning might do it no harm. But we have been taken to the cleaner so often by the legislature that I am beginning to doubt the value of the process.

It would seem that a well organized state department of education, such as we have, should know pretty well what ought to be done and what ought to be left alone. The teaching profession has a great deal of faith in the ability and leadership of the state department of education. But the legislature forgets this educational authority and goes its own way.

The present session has been a particularly prolific one for mandating the schools. The laity has been harping more and more on the subject of character education for the young and their cry of distress seems to have filled the legislators with renewed ambition to do something about it. Several bills have been introduced this session that would demand that we teach character education for at least thirty minutes a day.

I talked to Superintendent Sourpuss the other day and he was quite pernickety about the whole business.

"It makes me sore," he said, "just because some flathead [those are his words, Mr. Editor, and not mine] suddenly decides that we should teach character education in the school. Senator Whoosis, who hasn't been in a school since the Spanish-American War, is invited to address the League for Lawlessness and he bethinks himself of that old Commencement oration that won him the $25 prize in rhetoricals. The oration was all about character education, so he refurbishes it and the league goes on record as approving the unique idea.

"Now I have had the opinion," continued Superintendent Sourpuss with a strange glitter in his eye, "that most of the schools of the country have always made an earnest and honest attempt to teach character

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The legislative body meets with legislative zeal
And passes legislation for education's weal.
It adds a holiday or two for statewide celebration
It patches the curriculum for better education.

The legislative body does its duty, stern and just.
For every educative "may" it substitutes a "must";
These legislative mandates blot out educative sins
While legislator's hurdles bark the educator's shins.

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education practically every hour of the day. To be sure, we have had to teach it through some of the worn-out subjects that stick in the curriculum and I admit that teaching character through Latin is difficult to do. But it has been done, nevertheless, by a host of teachers. It has been an even more difficult job to articulate the teaching of character with the hard facts of civics and civil government but I thought we did the job rather cleverly with the material we had on hand.

"But when it comes to teaching Character Education I to the brighter pupils and Character Education III to the dumb ones for thirty minutes a day, I don't know where to start. Some pious folks maintain that the best textbook on character education is the Bible but, of course, the legislature does not approve of Bible reading in the schools."

Well, Mr. Editor, I left Old Sourpuss to his own mutterings. Of course, he is not a "progressive" and therefore his opinions count for nothing at all. Personally, I think that the character education bill will pass although it may be combined with the citizenship and traffic teaching bills and we may teach character education and citizenship education in alternate years.

Opposition Grows to Old Grimes

Another bill in which I am particularly interested is the one embodying educational legislation for honoring Old Grimes. This bill has the backing of the society of anti-musicians and would mandate the schools to open all sessions (after they are opened with an oath to the Constitution, a salute to the flag and a pledge to drink milk at least once a day) with the singing of that old English song:

Old Grimes is dead, that good old man
We ne'er shall see him more;
He used to wear a long black coat
All buttoned down before.

There is distinct opposition to this bill, however, from the League for Designs on Children. The League points out that such a song will make the little ones conscious of the fact that, in those crude early days, style was largely an individual matter, and it will create a feeling of independence toward dress that is not in keeping with the efforts at mass production today. The League is joined in its position by the Top-Cover Guild which demands that, if coats and other articles of apparel are mentioned in the school curriculum, similar attention ought to be paid to hats. It points out, and rightly I think, that the barbarous custom of the youth of the present day in discarding their headgear is bringing up an increasingly complicated economic question. I understand that a five-year plan is being discussed by the guild to bring pressure on pedagogues to demand that each child appear in school suitably attired on the head.

These important bills to which I have referred are not so trying to the pedagogical soul, however, as the bill which has just come out of rules committee and which concerns the matter of educational guidance. Guidance, being the current educational remedy that promises to cure all of the sins of the school curriculum, will have to be taught twelve minutes per day per pupil per week per forty weeks. Twenty-four pages of every textbook must henceforth be devoted to guidance under the terms of this bill.

At that, the bill is not as bad as the "Stretch-Bend" law which, you will remember, was passed several years ago and has not yet been repealed save in the more sophisticated schools. The stretch-bend law demanded that every child in the state be given two minutes of a sort of physical Couéism every hour on the hour. The kiddies were to rise, stretch, bend and totter to the count of teachers of English, Latin and mathematics. I often thought that this two-minute stretch should have been led by the superintendent of schools in person. Many of the executives have far too stiff a backbone and they need to be limbered up if they are to progress.

Finance Measures Dead

There are a number of other bills before the legislature that I have not had time to examine. The bill for more state money for the support of the schools will not be reported out of committee. It never had much of a chance, having been sent, by error, to the committee on erroneous taxation. The bill to permit the establishment of kindergartens is likewise dead. It seems that the little folk were unable to muster sufficient votes to make a creditable showing.

Summarizing the situation, I believe that the school curriculum will have to be changed considerably before the next school year as a result of new legislation. It is a hopeful sign that the legislators are so interested in the public schools.

I must cut this letter short as I am appearing before the educational committee which is considering a bill for the placing of Abyssinian birdbaths on every playground of the state. Since the recent trouble abroad, the Abyssinian vote has greatly increased and it is probable that the bill will pass.

Cordially yours,

FRED.

Planless Education

The present system of secondary education is what it is partly because it is a comparatively planless system. Its undesirable standardization, its uniformity (which is unquestionably more apparent than actual), and its spirit of quantity production are largely the results either of traditional influences, persisting from days of different educational aims, or of unthinking imitation of business and industry.

The paradox reflected in apparent decline in intellectual values, on the one hand, and in an undue fostering of "white-collared" ambitions on the other, has arisen because the school has allowed itself to take its immediate cues from every external demand. At no time in their history, have the secondary schools of the nation established a comprehensive program for themselves, based on systematic analysis of the needs of the society which they are intended to serve. To conclude that no better attack can be made on educational problems than that which is being made today is to dismiss without trial the possibility of a thoughtfully conceived and systematically organized educational program.—*Issues of Secondary Education,* Department of Secondary School Principals, National Education Association.

Our Schools Expand

Through Liberal Legal Interpretation

By M. M. CHAMBERS

THE American free public school was at first conceived as an institution of elementary education, largely limited to simple skills in reading and writing the mother tongue, and in the use of numbers. During the middle generation of the nineteenth century this was in general the scope of what were known as the "common schools." In that day the function of the schools may be said to have been but little more than to keep the bulk of the population barely above the level of illiteracy. This of itself was an historic achievement, in a world in which free public education was everywhere regarded as a radical experiment, likely to fail not only because of its enormous cost but also because of the popular unrest it might engender.

Secondary Schools Must Expand

Some two generations ago the question as to whether our own "common schools" should embrace and include public high schools, or whether free public education in our states should be limited to the elementary level, was finally settled for the American states. The renowned decision of the Michigan Supreme Court in the Kalamazoo case of 1872, together with analogous decisions in several other states, some earlier and some later, demonstrated that there were no constitutional obstacles to the development of the free public high schools as a part of the common school systems.

For a full generation the extension of public secondary education was relatively slow, on account of many factors. The absence of good roads and the meager financial resources of the small school districts made it impossible to develop rural high schools until a later day. In city as well as in country there was a strong tradition that boys and girls of the working classes should normally enter upon gainful employment at the age of fourteen or thereabouts, and at first there was little appreciation of any need for secondary education except for the few who would go on to college or university and prepare for one of the learned professions.

How all this has been changed since the turn of the century needs scarcely be told. The number of children attending high schools has increased by about 1,000,000 every five years during the past quarter of a century. Today 65 per cent of all children aged 14 to 17 years inclusive are enrolled in school. In Utah this figure has already reached 95 per cent. We are rapidly approaching the time when the full promise of the Kalamazoo decision will have been realized — the time when the American states will provide, not only in theory but in fact, free public secondary education for all.

Today there are more children enrolled in secondary schools in the United States than in all the rest of the world combined, a fact which may bring a thrill of justifiable pride to the heart of every American. We were a generation ahead of all the world in providing universal elementary education; and we are the first society on the face of the earth ever to adopt the ideal of universal secondary education.

Public Junior College Comes

It is true that the American four-year high school does not complete the period of secondary education as it has long been understood in England and on the continent of Europe. There the graduate of the secondary school is at an educational level corresponding to the mid-point of the American four-year college.

The fact that the high school as we now know it does not fully cover the period of secondary education has led to the establishment of junior colleges, of which there are now more than 500 in the United States. Two hundred of these are public institutions, maintained either by existing public school districts or by new special districts created for the purpose. In some fifteen states the maintenance of local public junior colleges in this manner has been expressly authorized by statute, and in a few other localities such institutions exist without statutory authorization.

Only a few years ago the supreme court of North Carolina decided that the school district of the city of Asheville could maintain lawfully a public junior college if in its discretion it deemed such a school necessary for the public good and within its power to support. The parallel between the Kalamazoo case and the Asheville case is obvious.

Do we stand today, with reference to the public junior college, at the same point at which we stood in 1880 with respect to the public high school? Happenings of the past few years strongly indicate an affirmative answer. In addition to the growth of regular public junior colleges, we have seen hundreds of recent high school graduates, unable to find work and unable to finance attendance at fee-charging colleges and universities, storm the gates of their local high schools clamoring for further educational opportunity there, and for the most part being of necessity turned away, and in several states then finding places in emergency junior colleges or emergency adult schools financed and controlled by the national government through its Emergency Relief Administration.

Though nothing should be said to detract from the achievements of the federal government in its emergency educational efforts, nevertheless the

wisdom of continuing two separately administered school systems—one federally supported and controlled, and the other maintained by the local district with state aid and supervision —may well be questioned. Is it not time for the states and their local school districts to take up the responsibility of offering a complete secondary school by establishing within the reach of all the local public junior colleges?

Public Function to Teach Adults

There is an unmistakable demand that the public high school shall not only revise and enrich its curriculum, but also that it shall extend its offerings sufficiently to become a veritable "people's college."

Such an institution would not only serve the youth of its community up to the age of twenty, but would also be the logical center around which numerous adult education activities, hitherto somewhat diffuse and chaotic, could naturally coalesce. Thus eventually there might emerge in every community a rich and varied program of secondary and adult education administered by the regularly constituted public school authorities, in place of the crazy patchwork of fragmentary, diluted, nebulous and competing adult educational enterprises that now strikes the eye of the observer in any community of considerable size.

The pinch of the depression compelled not only the nursery schools of the Federal Emergency Relief Administration but many of the regular public school systems to provide at least to a limited extent for the distribution of free milk or other articles of food to indigent and undernourished pupils. Thus the public school becomes, whether it wills or not, a social service institution engaged at least in some degree in the relief of the economically underprivileged. All such activities are clearly justified if they have a direct bearing upon the efficacy of the instruction of children who are entitled to free public education.

Concern for the health of the child was once thought to be properly left exclusively to his parents; but when school teachers are faced with the fact that many parents are not only unwilling but utterly unable to take any effective interest in their children's physical defects or minor ailments, the necessity of attention to these matters by some public agency is inescapable. Thus we have the school physician and the school nurse employed to conduct medical inspection of school children, and in some instances to provide the needed corrective treatment when parents are unable to do so.

It must be said that even yet a small minority of our states have made no legal provision whatever for medical inspection of school children, and that practically all of the provisions that exist in the majority of the states are merely permissive and not mandatory, leaving the inauguration of this service to the discretion of the local school authorities. This means that school health services are relatively well developed only in larger urban communities, and that they are extremely rudimentary or wholly nonexistent in thousands of village and rural localities throughout the land.

Recreation and Education Inseparable

The shortening of working hours, which has proceeded inexorably for a generation, combined with the widespread unemployment, which promises little abatement during the present decade, has created an unavoidable problem of providing public leadership in the fruitful and satisfying use of leisure time in forms of recreation that will contribute to the upbuilding of health, character and culture.

There seems to be a brilliant promise that the wholesome solidarity of family life, which has been so rapidly eroded by the conditions of modern urban living, may be restored in new forms by means of family participation in leisure arts and amusements. Even the earliest public schools recognized their responsibility for a rudimentary sort of playtime facilities and supervision for the children. In the modern school this responsibility has been multiplied a thousand fold, and to a commendable degree it has been well executed.

Playgrounds, gymnasiums, stadiums, swimming pools, athletic fields, libraries, museums, facilities for vocal and instrumental music, for the graphic and plastic arts, for handicrafts and hobbies, all are necessary school appurtenances. If we are to avoid divided administration, political rivalries and needless misunderstandings in the development of public recreation, is it reasonable to suppose that we should look to the public school authorities, who were first in the field and who must obviously always be in it, to provide the nucleus about which the commendable movement for vastly improved recreational leadership and facilities, yet little beyond its infancy, may rally?

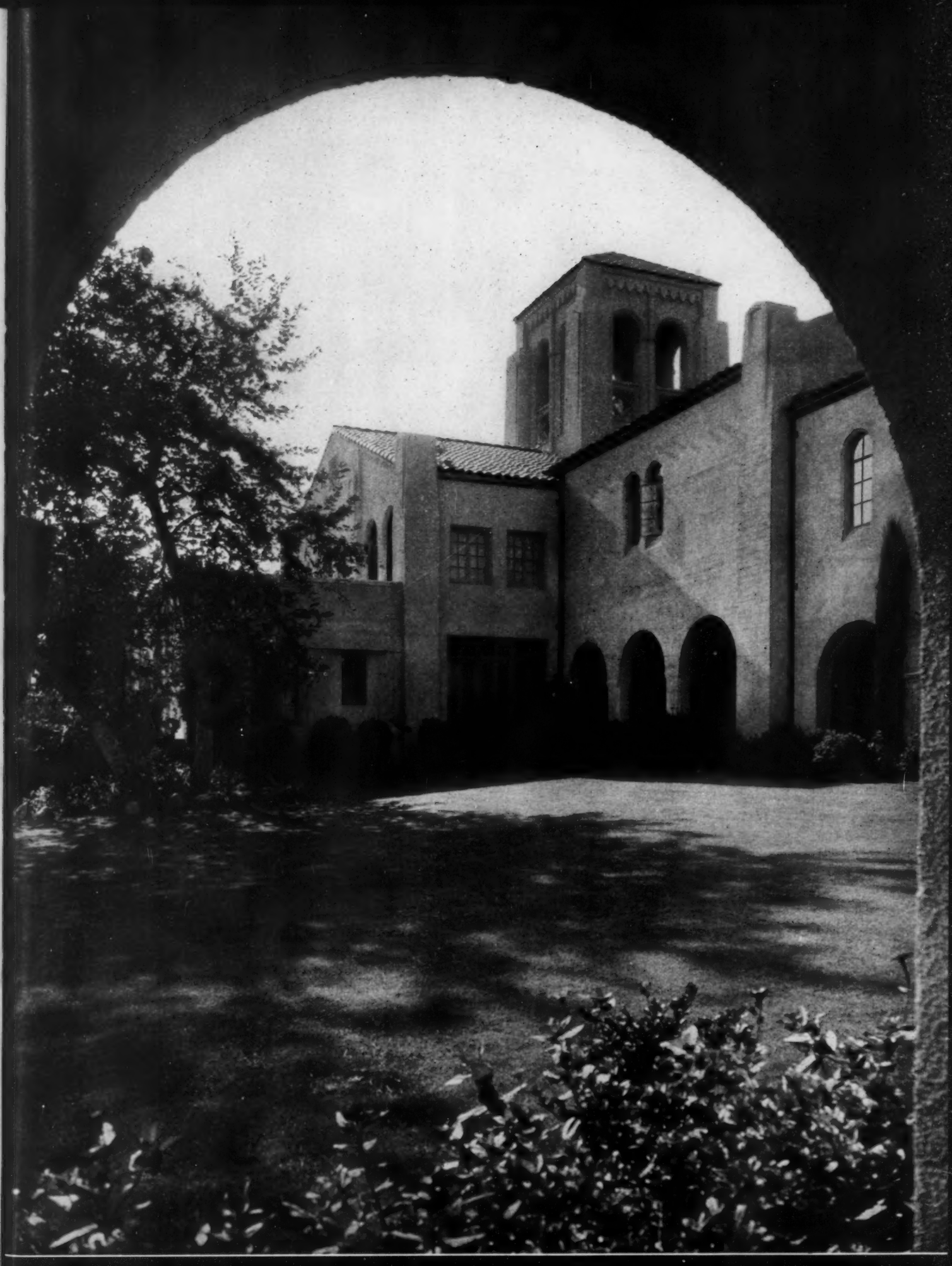
The public schools have from time to time assumed additional educational and recreational functions, and new responsibilities for the health and social welfare of children, as changing conditions have compelled them so to do. In recent years the vastly augmented public needs in all of these fields have forced the growth of these services so that the general absence of a recognized locus of coordination from which they can be most effectively brought to bear upon the difficulties of the individuals entitled to them is acutely manifest.

An immensely complicated mosaic of agencies, often ill coordinated and ill supported, functions in every large community. Yet in communities large and small, and especially in rural areas, many of these sorely needed services are entirely lacking, or operated on a scale insufficient to reach large numbers of children and youth who stand most in need of them. The public welfare requires that these services be extended. Inevitably they will be expanded, for we progress into an age of higher social organization in which they become indispensable.

Much Depends on Schoolmen

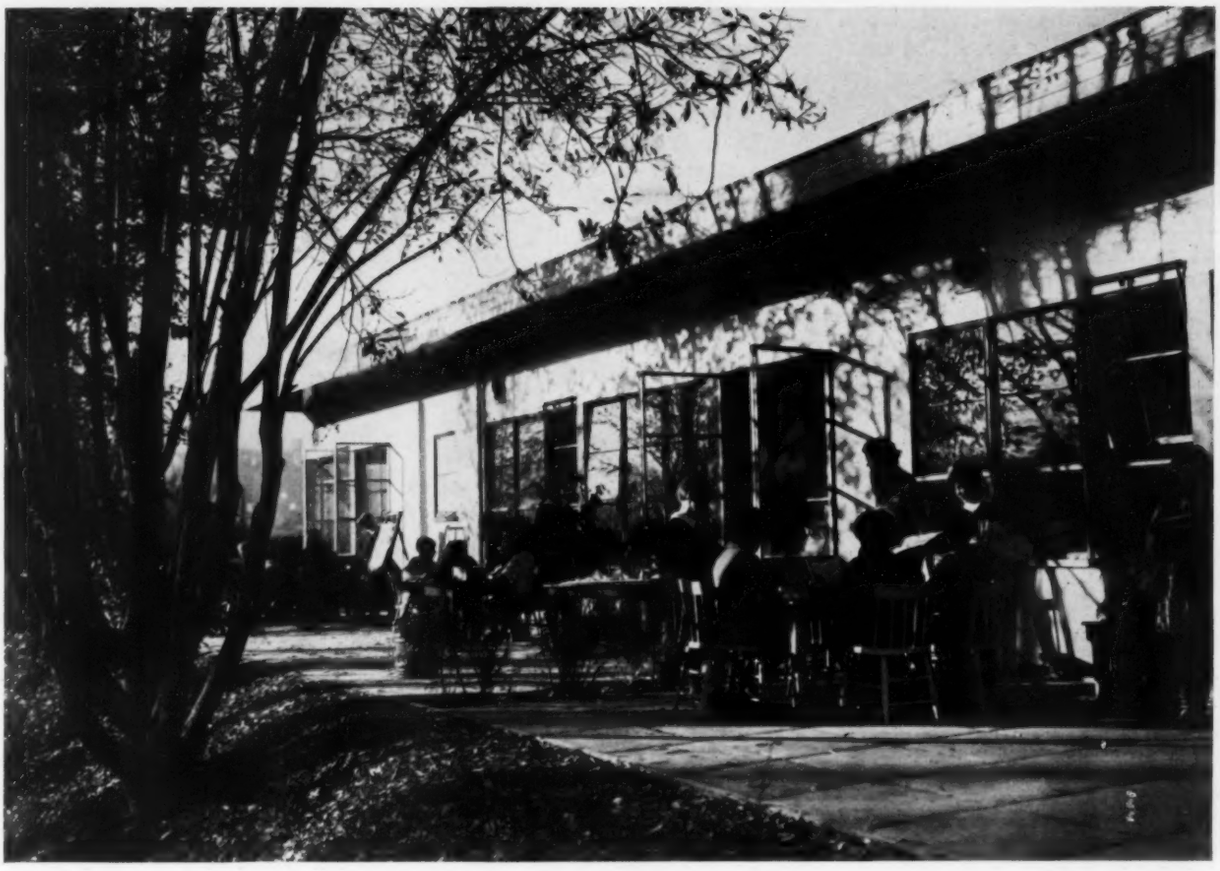
What rôle will the public schools assume in this new age?

There are ample precedents to indicate that legal authorization for the broadening of public school functions is not withheld when its wisdom becomes apparent. Much depends upon the alertness of school teachers and administrators in recognizing social trends and in rising to the tasks that are made evident by keen and sympathetic observation of the problems of pupils, parents and the community at large.



THE SCHOOL PLANT

One-story construction was held preferable from the standpoint of use in the Helen Bush School, Seattle, even though the more spread out plan is more expensive to heat. The dormitory units are two stories high because of advantages in operation, use and space. All classrooms in the Lower School face south, each having its own private play space. A sunny morning finds much work being done outside the classroom where tables and chairs accommodate pupils and teacher. The entire building is so planned that remodeling will be easy and economical. Partitions may be changed either to add or to reduce space.



Use Determines Style

By JOHN T. JACOBSEN

THE Helen Bush School, Seattle, Wash., is a progressive institution of 150 pupils ranging from nursery through high school. It is twelve years old and in the growing pains stage of development. Enthusiasm, drive, consciousness of purpose, a high class teaching personnel, a fertile source of pupil material, all combine to overcome the difficulties of an inadequate plant. The school grows and produces in spite of physical handicaps.

The site was accepted by virtue of expediency. The school has operated there for eight years and it was deemed advisable to make the final purchase and proceed with its development. Favorable is its peculiar situation, giving maximum exposure to sunlight and good protection from prevailing winds; also favorable are its central location and its low purchase price.

Certain difficulties had to be overcome in planning the buildings such as limited ground area, shape of the site and existing old buildings in use. It was necessary to develop a scheme that can be built piecemeal over a period of years, keeping the existing buildings in constant use until they are finally displaced by new. Even though it were financially possible, it would be out of the question to close school long enough to build a complete new plant. The process must necessarily be to build a portion each year during summer vacation.

Economy of construction was an important consideration. For economy the material must be wood-frame construction, and therefore to avoid fire hazard the classrooms must be one story only. There were, however, other reasons for this decision. One-story buildings are preferable for use even though they are more spread out and more expensive to heat. Frame buildings are more adaptable to changing use. Living quarters, however, must be of fireproof construction and a two-story building is preferable for operation, use and space.

Early in the conception of the buildings a theory of architecture was adopted. First, the buildings should be a stage for the school and its activities. A building is not complete in itself but only a workshop for the

actors or pupils and the settings which they need. Buildings must be completely neutral in aspect and as adaptable to every use as possible.

Finally and fundamentally important, as the school is a living, growing institution and in a constant state of flux, the buildings must not be finished products and dead but living and changeable. It must be possible to remodel them easily and economically, change partitions, add or take away space as the necessity arises.

The buildings are not conceived as a permanent monument to the founders, but as a living, versatile organism, adaptable to development and changing methods. Only so can the school be ensured against obsolescence.

With these axioms at hand the question of style was no problem at all. There is no style—in the sense of ornamentation. Rather, the form is predetermined by the structure and its use. It is like politeness—"to do the kindest things in the kindest way." This style has been variously termed modern, moderne, functional, futuristic, international. Its popular characteristics are flat roof and corner windows.

The various departments of the school, their use, arrangement and relation to one another were the concrete considerations of the design process.

The major divisions are:

Lower School—
- nursery
- kindergarten
- first to sixth grades

Upper School—
- sixth to twelfth grades
- art room
- science
- shop, etc.

Library—
- used also for study
- by all grades

Auditorium—
- for all functions
- may be used also for
- music classes

Administration—
- offices
- teachers' rooms

Dormitories—
- lower school, boys' and girls'
- upper school, girls'
- teachers'
- headmaster's apartment
- infirmary
- reception rooms
- living rooms

Dining Service—
- dining room for resident students
- for day students
- for functions

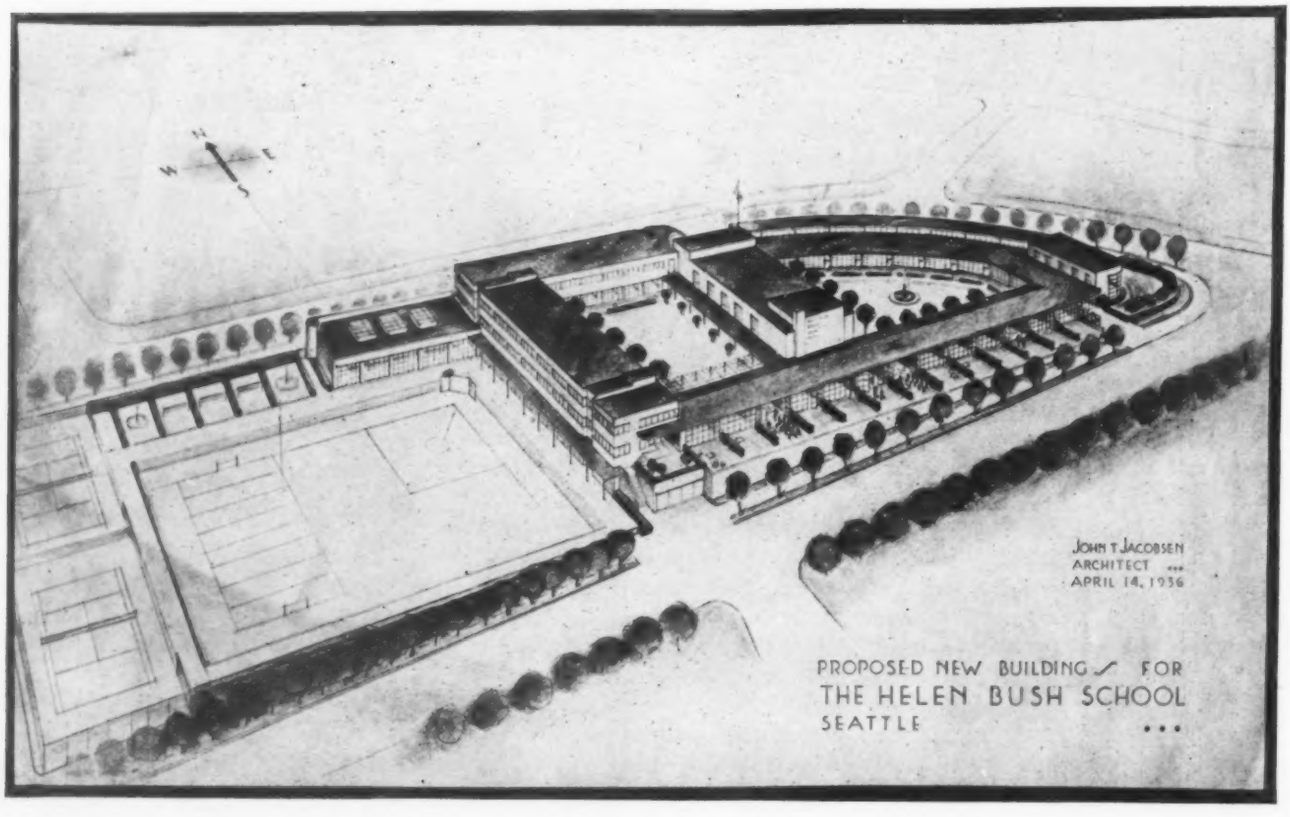
Athletics—
- playcourts

Athletics [Cont.]
- playfield
- gymnasium
- swimming pool

Service—
- kitchen
- heating plant
- storage
- stage
- help's quarters

The Lower School is a long, one-story row of classrooms, all facing south, each with its own private play space. A portion of this building for the younger children was the first section to be built. It is attached to the existing temporary classroom building and is arranged so that rooms may be added at either end. An 8-foot-long by 17-foot-wide unit of floor space was adopted for the structure of this building; doors and windows were designed accordingly so that partitions may be built every 8 feet as desired. Thus one unit of 8 feet is adaptable to office, lavatory or storage space, two units of 16 feet serve as small classrooms, three units of 24 feet are normal classrooms.

The Upper School, also a one-story building with classrooms, faces southwest on to a study court with laboratories, studios and shops facing northeast. The north rooms with higher ceilings have clerestory windows



facing south for sunlight. This building is also divided into convenient structural units. The building is drawn on a long sweeping curve to coincide with the curve of the adjacent street, and this line is beautiful enough in itself to eliminate any necessity of old style architectural ornamentation.

Between these two major elements are the pupils' entrance, the administration offices and library. This focal position is ideal for control and use.

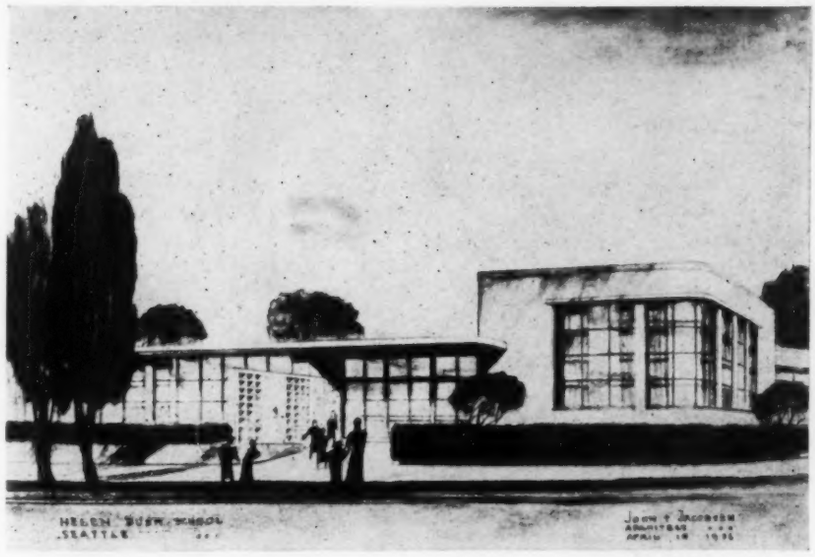
The auditorium is located in the center of the group, directly accessible from both lower and upper schools. It must justify its existence by constant use. In addition to public functions, it will serve as school assembly, music room (large groups in auditorium and small groups on stage), study and dancing space; classrooms in the Lower School may be used for costuming and dressing rooms. The lobby is the formal public entrance to the school and also serves as a secondary high school entrance and visitors' entrance to the dormitories.

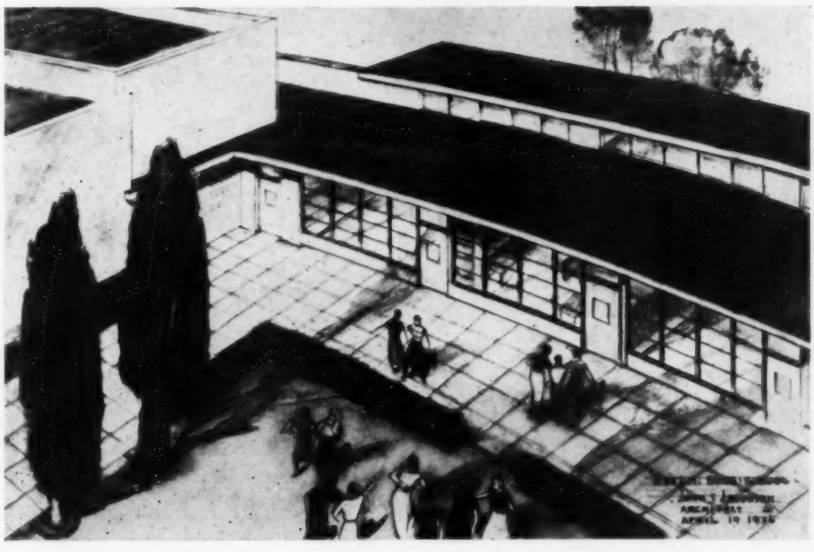
The dormitories are placed on the west side of the group, and as it was not practical to make buildings one room deep (as in the Lower School) the unit runs north and south to give sunlight in all rooms during at least half of each day. It is a two-story unit with small children (boys and girls) on the first floor and upper school girls on the second floor. Strategically located in the south end of the first floor is a suite for the headmistress, including living quarters, reception rooms and office.

The dining room is placed on the north side, easily accessible from all parts of the school. It is a large room opening both north and south for light and connecting with living rooms and reception rooms, accessible from all parts of the school by corridors and covered walks.

The kitchens and service are placed on the west end. At this point the ground falls away to the street a full story below so that service may enter directly into the basement. There is good space above ground for servants' living quarters.

Above the dining room at the second floor dormitory level is space for living room, sewing, storage, resident teachers and infirmary.





Flat roofs and corner windows characterize the architecture.

The units placed altogether form a figure-8-shaped plan and the two enclosed courts serve a definite part in school life. The east court is quiet for study and lounging, the west court may be used for play by the small children. A portion of the court is roofed with glass for outdoor play on rainy days.

The ground to the west of the dormitory is a full story below the dormitory building and may be easily leveled with excavated earth from the building operation. It is well located for the play field and will be laid out for games of all kinds.

The gymnasium, therefore, is placed directly under the dormitory building opening with full glass walls on to the play field to the west. This arrangement is both economical and affords easy access from the Upper and Lower Schools and the dormitory.

Finally a swimming pool is located in a separate wing on the northwest corner of the group. In this location it is adjacent to the heating plant (subbasement under the kitchens), the dressing and shower rooms (north end of gymnasium) and opens on to the play field to the south. The flat roof (level with the first floor of dormitory) may serve for sun bathing and as a grandstand for athletic contests.

So the divisions of the school are integrated and interwoven in their proper relationship by a group of connecting building units, designed for maximum service and adaptability to ever changing conditions and methods of modern education.

A glimpse into the special classroom for boys under fourteen who are overage for their grade at one of the new Southbridge schools. Metal wardrobes have been built into each classroom.

Tale of Two Schools

By M. A. DYER and FULLER L. AUSTIN

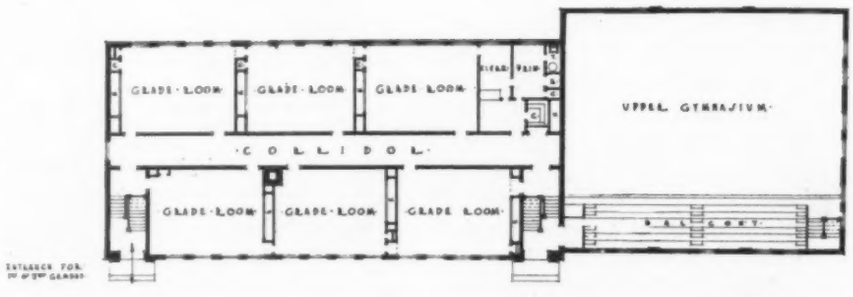
THE town of Southbridge, Mass., has recently completed the construction of two elementary school buildings. One of these, known as the West Street School, is situated on a lot containing approximately fifteen acres and adjoins the high school athletic field.

This building accommodates eight actual classrooms, principal's and clerk's offices and toilet room, and between Grades I and II there is a classroom unit used as an activity room with connecting toilets and storage space. On the lower floor are provided locker rooms, showers and boys' and girls' toilet rooms, which are at an approximate level with the gymnasium.

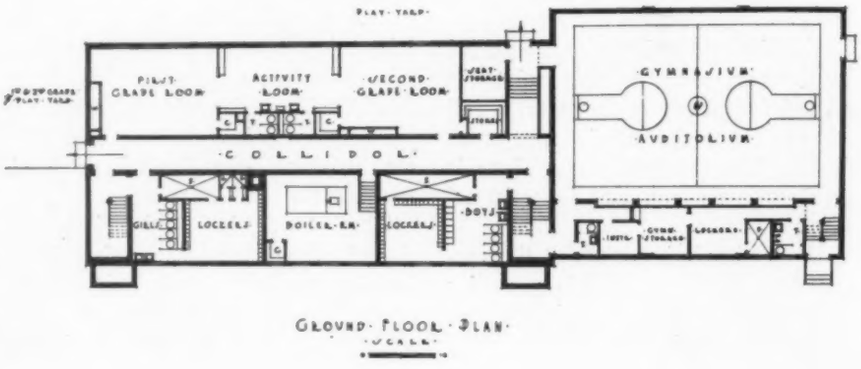
The gymnasium accommodates a full-sized basket ball court with athletic instructor's office, storeroom, visiting team lockers and shower rooms adjoining. It is equipped with a movable stage for auditorium purposes, the stage slides out of the way when the full area is desired for gymnasium activities. This room has seating capacity for 300 in a balcony that overlooks the play area.

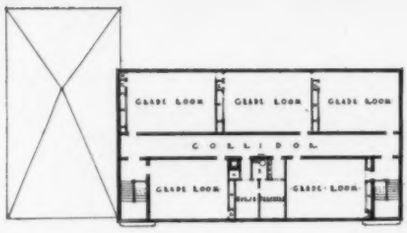
In another section of the town is located the Eastford Road School, which contains eight actual classrooms, a manual training room, library and an activity room between Grades I and II, together with principal's and clerk's offices, toilet rooms, nurse's and teachers' rooms, and an auditorium with seating capacity of 400. This section of the building is so arranged that it may be used for public purposes, without disturbing or entering the school proper.

The buildings are designed in the style of the Georgian period, with ex-

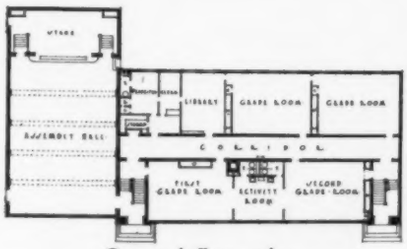


Plans of the second and ground floors of the new West Street School, Southbridge, Mass., designed by the M. A. Dyer Company, Boston.

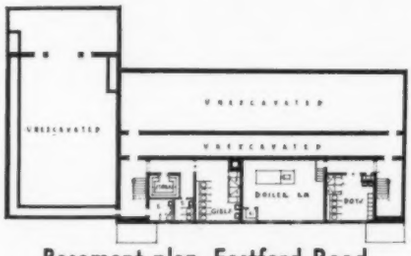




Second floor plan



Ground floor plan



Basement plan, Eastford Road

Corner of the library and (below) activity in first grade at West Street School, Southbridge, Mass. Movable furniture with special offset table desks and posture chairs is a part of the equipment.

teriors constructed of dark cherry red, water-struck brick and cast stone trimmings. The corridors, adjoining walls and staircases are of fireproof construction. The corridor walls are of exposed glazed tile, and the floors, stairs and stair treads are covered with marbleized asphalt tile. Fireproof ceilings are provided over each boiler room. The remaining construction is of slow burning, second-class type, with metal lath and hard plaster used throughout in the classrooms. The ceilings in both schools are finished with acoustical tile.

The gymnasium has a balcony seating 300 persons and a movable stage. Classroom ceilings are of acoustical tile. A modern sound system has been installed.

Each school is heated by a vapor system with forced return system and is equipped with oil burners. The classrooms are equipped with unit heaters. The most modern installation of sound system has been provided, together with intercommunicating telephones and a fire alarm system.

Among other modern features that have been provided are complete playground equipment; visual education equipment; movable furniture with special offset table desks and posture chairs for Grades I, II and III; the better-sight type of desks for Grades IV, V and VI; complete gymnasium equipment including electric scoreboard, climbing ropes, rings and trainers' tables; modern teachers' desks, tables and rest room furniture. The auditorium and gymnasium are equipped with steel folding chairs. There are in each school a piano, duplicating machines, typewriters and electric hand dryers. A stage curtain and cyclorama are provided in the auditorium of the Eastford Road School.

The total cost of both buildings including land, architect's and engineer's commission, continuous clerk of works' supervision, complete furnishings and equipment, finish grading, walks and playgrounds was $247,000, or 33 cents a cubic foot cost, excluding the land cost. The schools were erected under a federal grant, the government furnishing 45 per cent of the cost of all building construction, equipment and furnishings.

Going Over the Roof

By A. C. LAMB

ROOF repairing is one of the phases of building maintenance that must be given constant attention. This is particularly true of old buildings. We can expect that a new building, properly constructed, will stand from eight to ten years without much thought being given to roof maintenance, but from then on, it will be a problem that should receive careful and frequent consideration.

Roofs are subject to severe weather conditions which cause expansion and contraction, resulting in cracks. Blisters form and these are injurious to the surface. Flashings pull loose and permit snow, ice and rain to seep into the parapet walls and thence into the rooms below, causing discoloration and falling plaster.

Locating the Leak

One of the difficult problems in roof leaks is to locate the exact spot at which the water is entering. Water frequently runs many feet across the attic before penetrating the ceiling. In cases in which there is no attic or in which the attic is so small a man cannot get into it, the problem is particularly aggravating. A roofing contractor recently explained that his method of locating roof leaks in such instances is to pick a likely spot and start ripping up the roof. He continues until he finds the point at which the water is entering, and then proceeds to put down a new roof to replace the torn up section. Obviously, if he makes a poor guess at the start, the owner may have a bill for a complete new roof.

We check the roof carefully for large or small cracks, blisters, loose flashings and examine particularly the edges of drain sumps and vent stacks. Any place that looks the least bit suspicious is carefully patched.

Two main types of roofs are used in school building construction—the flat roof and the hip roof. It is the flat roof that requires constant attention after a few years of service.

Flat roofs are usually of laminated paper or sheet metal. Frequently, the laminated paper is covered with sand and gravel. This sand or gravel covering is for the purpose of dissipating heat from the sun. It makes the roof heavy and more difficult to patch.

Tar paper makes a cheap, short lasting roof and should not be used except for temporary structures. A good quality felt paper, impregnated with asphalt and laid with asphalt, should always be used when long life is desired. Asphalt should not be used on tar paper or tar on asphalt paper. Tar roofs craze, check and soon go to pieces in cold weather. The tar softens in hot weather and on the slightest inclines runs down to collect in the low spots.

Flashings must be kept tight by calking or remortaring as the original mortar or calking shrinks and falls out. The flashing is probably the most important phase of the flat roof. Snow and ice accumulate during the winter and when the spring thaw starts, water will back up under the flashings and seep through the parapet walls unless the flashings are kept tight.

"The Great Destroyer"

The parapet walls themselves should be lined on the inner surface with a nonabsorbing brick or other construction material that does not absorb moisture or they should be treated with an asphalt preparation to prevent moisture absorption in case porous materials are used for backing up the face brick. A parapet wall that absorbs moisture is a constant source of trouble. No matter how tight the roof may be, moisture will eventually get into the building through the parapet wall if it is constructed of porous material and if it has not been treated to make it weatherproof.

Moisture is by far the worst enemy of buildings and is respected by the engineering fraternity as "the great destroyer." Lack of moisture is the main reason for the extremely long life of buildings in Egypt and our Southwest. This, added to the lack of frost, permits building with cheaper materials that outlast anything built in localities where there are both moisture and frost to combat.

Cracks that occur in roofs because of expansion and contraction resulting from changes in temperature can be repaired by filling the cracks with a plastic compound composed of asphalt and asbestos fiber. After the crack is filled with this material it should be covered with a fabric similar to burlap, which has been treated with asphalt. Small cracks should be covered with a strip of this fabric at least 6 inches wide, or wider in proportion to the width of the crack. The plastic material should be spread at least 3 inches back from the edges of the crack and the fabric pressed down on the plastic material.

Treating Roof Blisters

The final operation consists of painting over the fabric with a liquid coating containing asphalt, which is about the consistency of thick paint. This will form a patch that is absolutely weatherproof and will give with the expansion and contraction of the roof.

Another source of leaks on roofs are blisters. These blisters sometimes fill with gas and often with water and, in some cases, cover several square yards of roof. When the blisters contain water, it is due to the absorption of moisture that is drawn up to the surface of the subroof by the summer sun and accumulates under the paper. In double slab roofs that are filled with cinders or other light material, gases accumulate and cause large blisters; these, if not re-

paired, will soon ruin a roof. Blisters should be cut open by slitting with a knife. The heavy plastic material used for cracks is then spread inside the blister under the roofing paper and the paper is pressed down into the plastic. The slit is then treated as suggested previously for cracks, being covered with the same fabric and a topping material consisting of asphalt having the consistency of thick paint.

Flashings are frequently made of galvanized metal. After a few years, these rust away and become perforated and bent from the action of frost and ice. The metal pulls out of the joint in the parapet wall, which permits water to run down behind the flashing and thence under the roof material. The only remedy for a situation of this kind is to replace the flashing. The roofing paper can be carefully lifted, the flashing metal inserted beneath and tightly calked into the parapet joint, and the roofing paper then pressed against the flashing. The paper should be thoroughly coated with asphalt so there will be a good bond between the roofing paper and the flashing.

Flashings made of galvanized metal should be painted to prevent rusting. Whenever possible, either copper or lead should be used for flashing. This is more expensive but more lasting. Both copper and lead flashings will pull away from parapet walls and must be frequently inspected to ensure their being refastened into the joint before bad leaks develop.

Parapet walls must be maintained in a weatherproof condition by pointing, painting and calking. Occasionally, we find that the coping or top covering of the parapet wall is admitting moisture. In cases in which the leaking coping is of tile or stone, either natural or artificial, the coping should be removed, a covering of copper or roofing paper put over the parapet and the coping replaced.

The ideal method of sealing a parapet wall is to cover the top of the wall with copper wide enough that the edges may be bent down and forced into the first joint the same way that the flashing at the roof line is inserted in the joint. The coping is then placed on top of this copper shell. Such copings are expensive but permanent. When funds are not sufficient to permit the use of copper or lead the parapets can be sealed satisfactorily for a number of years, with a heavy roofing paper. Both the exterior and the interior faces of the parapets should be thoroughly pointed at all times to prevent the absorption of moisture, as this point of attack is as vital as the roof itself.

The insides of all parapets may be treated by painting or spraying a liquid asphalt material on to the brick, terra cotta or concrete from the flashing line to the coping. This effectively waterproofs for five years.

Hip roofs are frequently treated with tile, slate, copper lead or concrete in slabs. A roof of this type is almost as long-lived as the building.

Occasionally the wind in a severe storm will blow some of the tile loose. This necessitates straightening out the tile and in some cases replacing them when they are broken. In one instance, it was found necessary to repair a tile roof owing to the fault of the contractor who originally constructed the roof. The subroof was not properly constructed. After fifteen years in service, it deteriorated to the point at which it was necessary to remove all the tile and build an entirely new subroof. In this case, the subroof was constructed of matched lumber on wood rafters, the matched lumber being covered with two layers of tar paper. The tar paper cracked and checked until water seeped through into the attic whenever it was blowing hard enough to drive the rain up under the tile. The tile was removed and a new subroof built by covering the matched wood roof boards with three coats of asphalt paper, cemented down with liquid asphalt. The tile was then replaced, using copper nails and increasing the lap of the tile. Originally, the roof tile had not been lapped sufficiently to prevent water blowing under the open ends. This necessitated buying additional tile to make up for the extra lapping. There are other buildings in our school system that are eighteen and twenty years old on which the tile has never been touched and they are as tight today as they were when constructed.

Slate roofs come in the same division and seldom need any attention other than a periodic check-up. When slate roofs do need repairing, the work should be left to skilled tradesmen who are thoroughly familiar with the construction of slate roofs. Slate is difficult to install because of its brittle quality and, therefore, requires a capable man to make any repairs. A man who does not understand the work will do more damage than good. However, repairs are so infrequently necessary that it is virtually no problem at all from the standpoint of maintenance.

When Building a Playshed

WHEN playrooms or gymnasiums are not available, schools find the playshed a reasonably satisfactory shelter for the children during play periods in wet weather.

The material and labor cost of the playshed is relatively low. The following suggestions for the construction of such a shed have been prepared by Troy D. Walker, high school principal, Baker, Ore., and D. A. Emerson and Dr. V. D. Bain of the Oregon state department of education. They are included in a recent manual issued by C. A. Howard, state superintendent.

The playshed should be easily accessible to the schoolhouse but it should not interfere with lighting or the view, these schoolmen point out. It should be connected with the schoolhouse by a walk which in some instances may be covered.

Good drainage is essential. The floor may be slightly higher than the ground around it and it should be covered with sand or screenings. Tile drains around the shed will facilitate drainage.

Cement footings, with the posts tied to the footings, should be used. The posts should be braced to trusses constructed of two-inch material. A third to a half-pitch roof is desirable, and 12 feet is a good height. This will accommodate swings and other play apparatus. A painted shingle roof of the hipped variety will do.

Free Rides Pay Well

By O. A. TOWNS

Free bus transportation to this Illinois community high school brought attendance up 50 per cent, at the same time reducing the per capita cost. Naturally the public is pleased. So, too, are the pupils, happy groups of whom are shown here.

OPPOSITION to free transportation for rural pupils is traditional and has caused many communities to establish it and pay for it in spite of legal technicalities. Those of us on the firing lines of rural education have been driven frequently to play the part of law-breakers in order that rural children might have the opportunity to attend rural high school. The rise in attendance that has resulted and the lowering of per capita cost give ample evidence that free transportation has made good in furnishing education for the secondary school pupil at a cost that is not a burden to taxpayers.

In 1928-29 the enrollment of Reddick High School, Reddick, Ill., was fifty-eight, with an average attendance of forty-eight for the year. The cost of maintaining a first-class high school with this enrollment was high. The challenge to our board of education was to find a way to increase attendance rather than to lower costs by lowering standards. Transportation by bus was tried out in 1929 and 1930 with the result that many pupils enrolled who were previously unable to attend high school. This brought the attendance up more than 50 per cent. It also brought the per capita cost down.

With the increased number of pupils there came to the high school an increased interest and a school spirit that were marked. Parents were pleased that they were no longer required to keep a car in order and to pay for the fuel and repair bills incident to everyday wear and tear. Pupils were glad to be free from the daily responsibility of getting cars started and the fuss and trouble of keeping the cars in working condition.

One of the administrative problems when pupils furnished their own transportation was during the noon period. After going home for lunch many cars would furnish the means of joy rides and pupils would be found in adjoining communities they could reach within an hour's time. Parents were indulgent with gasoline but complaints of reckless driving were of daily occurrence. The busses have done away with all this trouble.

Busses are driven by mature drivers who know the risks of travel and who at all times look to the safety of the pupils they carry. Under the plan of individual transportation tardiness was common and neither parents nor teachers were able to get at the cause. A pupil who was late would report car trouble, which served as a blanket excuse for many abuses. Since the busses have been in use pupils arrive on time and as there is no excuse for being late the problem of tardiness is solved.

Attendance also has been better with the consequent result that classwork is of a higher standard. Busses run on regular schedule and parents know where their children are and when they will get home. With fewer "tardies" and more regular attendance as a result of bus service, a great step was taken toward raising the rural high school to a higher level of service. Aside from these values to pupil and school, as well as the satisfaction given parents, transportation by bus is enough cheaper than individual travel to justify its use by the school district.

Our conclusion in this district is that if rural boys and girls are to have a high school education at a cost to taxpayers that will not become burdensome, the school of about 200 enrollment served by a bus system is the only way to furnish them this opportunity.

Shop Follows Factory

By WALTER J. ROBINSON

Drill press

Metal turning

Scroll saw

CRYSTAL CITY, Mo., is a small industrial town thirty miles south of St. Louis on the bank of the Mississippi River. It has a shifting population of between 4,000 and 4,500 people. A large foreign element prevails, with Italians predominating. The chief industry is glass, one such factory employing 2,300 men and women the year round.

Three miles north of Crystal City, at Herculaneum, a smelter is operated by a large company. Festus, which joins Crystal City on the west, has a population of 5,500 and its chief industries are a shoe factory and a garment factory. Thus it is readily seen that the town is in the heart of an industrial center.

The school, with an enrollment of 850 pupils, started the introduction of departments about five years ago. Attention was first directed to the home economics department, where a change was made from general to vocational work. The growth was so rapid that it was set up as a separate unit in a cottage purchased and modernized by the board of education. This project was described in The NATION'S SCHOOLS for September, 1936.

The next improvement was in the music department, where only thirteen instruments were in use. At the present time the school owns 125 instruments and 165 pupils are enrolled in music (The NATION'S SCHOOLS, October, 1936).

Finally the industrial arts department began to take shape and this work is being rapidly carried on to completion.

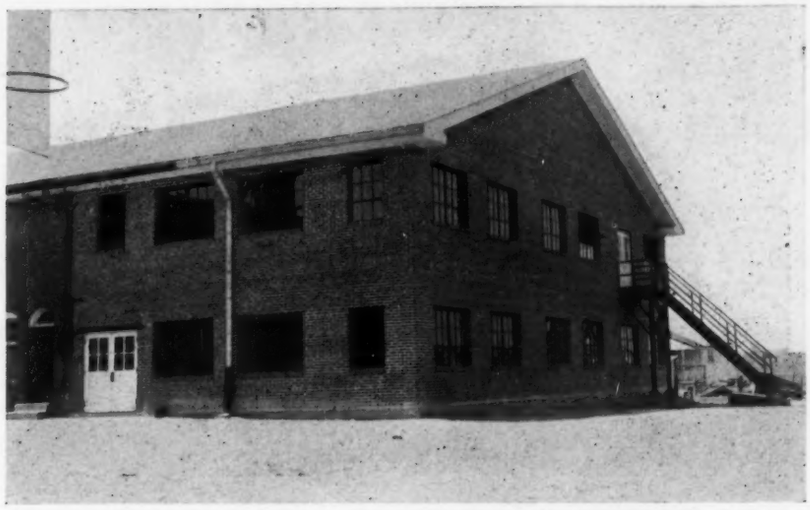
In this division the superintendent thought there should be a close correlation between the activities carried on in the shop and at least a part of those in the glass factory, as 90 per cent of the boys being graduated from the school are employed in the factory. Therefore, in order to know what activities to set up in the school shop that would be profitable to the boy when he secured employment in the factory, a survey had to be made. This was done in the spring of 1936 in consultation with the departmental heads of the factory, board of education and superintendent of schools.

The first step in the reorganization program was the appropriation of between $13,000 and $14,000 by the board of education, upon the recommendation of the superintendent, for the enlargement of the shop. The former program of the industrial arts department consisted of woodworking, drawing, electricity and sheet metal, all carried on in crowded quarters.

The building as it now appears is a two-story unit with the shop occupying the first floor, with an area of 2,200 square feet, and the science and music departments occupying the second floor. The shop proper consists of a balcony for storing lumber and metal, a storeroom for supplies, and a drawing and finishing room, which are partitioned from the laboratory section of the shop with plate glass.

The expenditure of the amount necessary for the building, together with other improvements, without borrowing any money did not leave as much to spend for shop equipment as was originally planned. However, between $800 and $900 was invested in the following: one metal turning lathe, one wood turning lathe, a scroll saw, a drill press with mortising and shaping attachments, an acetylene welding set, and a casting furnace and foundry supplies. In addition to the new equipment the shop contained enough bench woodworking and metal working tools to accommodate a class of twenty pupils. A universal saw and a jointer were included in the old equipment. It is

Pattern



The school shop occupies the first floor of this building.

the intention of the administration to spend a like amount this year and succeeding years until the shop is properly equipped to carry out the program outlined below. At least two metal turning lathes will be added this year.

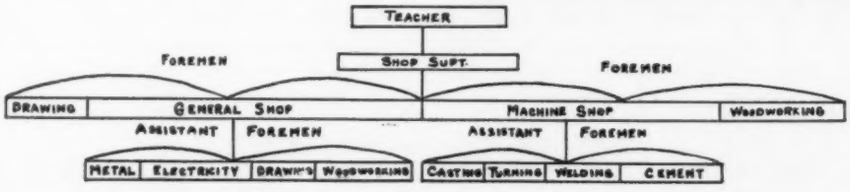
In the setting up of this equipment the factory has cooperated to the extent that it built the wood lathe, the casting furnace and now furnishes, free of charge, all metal used in turning and casting. It also furnishes acetylene and oxygen tanks, rent free, and the gas at a low rate. All other supplies used in the shop are furnished at wholesale prices.

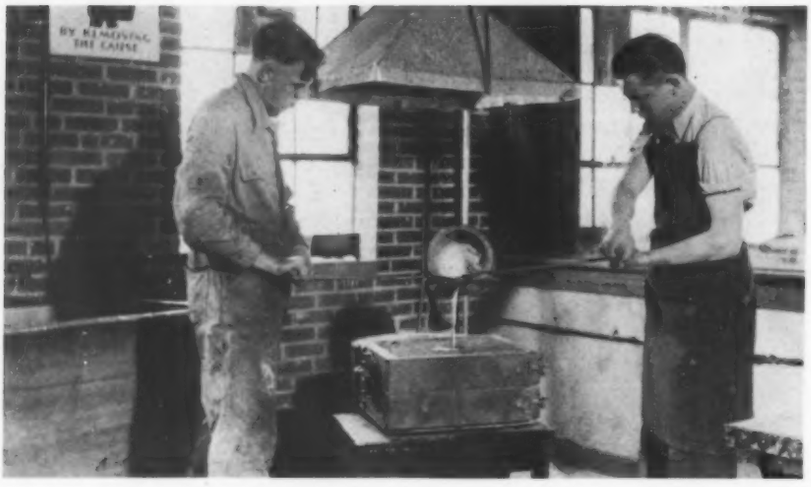
The program is a general shop course offering four units as follows: (1) General Shop: a course open to freshmen and consisting of nine weeks' work in each of the following—electricity, sheet metal, drawing and bench woodwork; (2) Woodworking, Bench and Machine: a one-unit course open to sophomores; (3) Machine Shop: a course for juniors and seniors in metal turning, welding, casting and Keene cement, and (4) Mechanical Drawing: a course for juniors and seniors. The first semester is devoted to working drawings and orthographic projection, and the second semester to machine and architectural drawing.

Woodworking section (above) and drafting room (below).

Having in mind the idea of correlating the activities of the shop with those in the factory the personnel organization has been set up as shown in the diagram below.

The shop superintendent and foremen are selected for the term while





Boys pouring molten metal.

the assistant foremen are changed every nine weeks.

In order to give the boys a broader knowledge of industry and acquaint them with factory officials, men who are in charge of different departments are invited to discuss the practical side of factory work as they experience it. Contacts made with these men are a great help to the boys when seeking employment. An agreement is in the making between the school and the factory whereby the machine shop department of the factory will employ two high school graduates each year to serve a four-year apprentice period after which they will be absorbed by the plant or sent out to other industrial plants. Field trips are also used.

The program is not old enough to determine its success but some of the training received by the boys has already been put into practical use. Pupils in the drawing class plotted the school grounds and sketched all the floor plans of the existing buildings preparatory to a survey being made by the state department.

So far the work is being enthusiastically received by the community, and we feel that the experiences gained by the boys in the shop and their contact with industrial leaders will help them to adapt themselves to the community in which they live.

Life Span of Fixed Kitchen Equipment

A record card that will indicate the cost and life expectancy of fixed kitchen equipment has been prepared by the American Dietetic Association following a three-year study of the subject. On one side space is provided for recording the name of the machine, date of purchase, installation date and cost, type of care and servicing, and description of machine with details of operation. On the reverse side is space for record of repairs.

"When the project was started there was little information available as few people had kept anything like complete and accurate reports," according to Miss Emma F. Holloway, supervisor of institutional courses, Pratt Institute, Brooklyn, N. Y. "There has, however, been an increasing interest in the study and many who had no information on file are beginning to keep records of new equipment. We have had reports of a few machines in use fifteen years and still in good working order. Most machines in use ten years or more are needing frequent repairs. The cost of repairs for the second five-year period is reported as almost double that of the first five years."

Name Mixing Machine (—)

Date of purchase 1925

From A. Blank and Co Chicago, Ill.

Cost 525.00

Terms Cash

Installed Summer of 1925

By A. Blank Co.

Guaranteed for

By

Inspection wk. [X] mo. [ ]

By Maintenance dept. Hospital

Oiling wk. [X] mo. [ ]

By Maintenance dept. Hospital

Period free service 3 mo. [ ] 6 mo. [ ] 1 yr. [ ]

Period free repairs 3 mo. [ ] 6 mo. [ ] 1 yr. [ ]

Average hours per day used 1½

Parts easily available Yes [X] No [ ]

Description

Number Model 36-40 Serial U 184 New [X] Rebuilt [ ] Second-hand [ ]

Capacity 15 gallons

Attachments 2 15 gal. bowls

2 beaters

2 paddles

Operation

Gas [ ] Steam [ ]

Electricity [X] Hand [ ]

Motor # 427670 (Blank make)

H.P. 1

Current D.C. [ ] A.C. [X]

Cycle 60

Trade-in value $ 52.50

Cost of Upkeep

Date	Time Required	Description of Repair	Cost
11/14/32	3hr	No 4 gear does not work	3 25
11/29/32	½hr	Braze one mixing bowl	50
7/29/33	1½hr	Oil leaking ponit. burned mixer	1 50
3/28/33	½hr	Repair beater (loose bolt)	50
12/17/33	2hr	Suspect large aluminum container and see if it can be repaired	2 00
1/4/34	½hr	Repair foot pedal	50
7/29/34		Burned motor	40
1/2/35		Repaired leak	1 17
7/26/35		Removed elevating apparatus	5 75
1/26/35		Start motor	1 25
1/24/35		Repair and overhaul mixer	25 17
7/21/35		Repair	1 47
12/12/35		Re-paint	2 00
1/7/36		Repair brace on beater	1 00
6/10/36		Repair large whip	1 50

A room informal, attractive, inviting and colorful—you will find the library of the elementary school building at Manhasset, Long Island, has these characteristics. Sofas and wing chairs are in pleasing colors.

They Call It "Our Library"

By PHYLLIS R. FENNER

WHEN is a library more than a library? There's a riddle. The answer is, "When it is in a modern elementary school."

When children show their parents around the elementary school building at Manhasset, N. Y., they say proudly "This is *our* library." And, indeed, it is theirs. They share in every phase of it.

Were you to come into the library at almost any time of day — before school, during school or after school — you would likely find a group of boys and girls in one corner excitedly "swapping" stamps. In another corner there might be a group doing reference work, looking up what guinea pigs eat or even, as in the case of one boy, looking up the "Egyptian" alphabet to use as a code so his brother could not read his notes.

At the desk there would very likely be a boy or girl putting the cards in books, handing out book marks or counting the circulation of the day. Around the room in comfortable chairs or on Story Hour stools by the shelves would be other youngsters reading or choosing books. Such is a picture of the room's busy existence.

We had the problem of converting this library from a high school library to an elementary school library. We were fortunate in having an unusually attractive room. It was not two classrooms put together, rectangular in shape with windows on one side as so many school libraries are, but our room was planned for a library in the beginning. It is lighted by a skylight, which has some disadvantages in summer but is wonderful the greater part of the year. There are windows on two sides. In shape it is almost square with a bit of irregularity lending interest. An alcove is used as the librarian's office.

The high school furniture could not be used because of its size, so we did not have to consider keeping it. With fear and trembling, we decided on a somewhat revolutionary move. We wanted, as has been said heretofore, to have a room that was informal, attractive, inviting and colorful.

Would such furniture stand up in a public school? Besides the tables and other typical library furniture we planned to have a couple of sofas, two wing chairs, six club chairs, all upholstered in attractive colors. A person who is considered an authority on school libraries, when told of the

plans, said: "The children will fall asleep." She must have been thinking of children other than ours.

Then came the question of getting this kind of furniture. We found that we could not buy it ready made. There was no such thing in the market for children. The nearest approach was the child's boudoir chair which, of course, would not do. The furniture had to be made to order. It had to be well made or it would not stand the wear and tear of everyday use and then some people would say, "We knew that type of furniture was all wrong for a school." It would have to have a strong frame, be hair stuffed, be covered with a durable yet attractive material and be easy to move about for Story Hour or dramatizations.

Well, all of our difficulties have been overcome. We have had the furniture for some time and with constant use it shows few signs of wear. Our fear is gone. We believe we were right. Children can be made comfortable even in school. And we have, we are quite confident, one of the most attractive and most used elementary school libraries anywhere.

Our room is not only attractive but it is practical. The tables are in the corners of the room. The upholstered furniture is easily moved. In three minutes we can push our chairs and sofas into a circle for Story Hour or we can move them into a semi-circle for dramatization, using half the library for a stage, or as in the case of very little children the whole library is their stage. In three minutes' time it is back again where it belongs.

Stools in Steady Use

Story Hour stools serve many uses. Kept around the rooms near the shelves they are comfortable to drop on when looking for a good book. When there is a large class for Story Hour they are used in the center of our circle. A display table with a glass top is an excellent place for stamp exhibits (under glass) or for pictures and maps.

In planning our library program we made the librarian a teacher with the whole curriculum for her subject. The librarian, on her part, had to forget that she was a librarian in the narrow sense of the word.

We did not want the old more or less formal scheduled periods, marching in an entire class twice a week for thirty minutes' reading. We wanted a flexible program that could take a group several days in succession if necessary to complete a project, and would allow the library to be open for pupils to come in freely as they had time. While, in this, our beginning year, we have not been able to reach all classes as we wished, at the same time we have made the library a vital spot in our school, a place to which all children come whether they are readers or not, which we think is as it should be.

Suggestions for various activities carried on in the library come from both teachers and librarian. A teacher whose class is studying Greece may ask to bring her class to the library to hear Greek myths. The librarian, on the other hand, may suggest to a teacher that her class is ready to learn how to use the card catalogue. A few teachers have wanted frequent periods of dramatizing stories or a regular Story Hour. And so it goes.

Our library carries on the regular activities such as reference work and supplementary reading as do other libraries. Pupils are taught to use it as soon as they can read well. What we wish to tell about are those things in which it differs from most libraries.

Developing the Library Habit

In the first place, we want our children to get the library habit since after leaving school the library is one of the best sources of self-education. Now we must admit that all people are not omnivorous readers, and many of them will never become so. How many parents who do not read a great deal themselves expect their children to pick up a book every free minute! But every child should become familiar with the world's best literature and be made to realize the possibilities of the library.

With that idea in mind we wanted a room that would be attractive to children, that would draw them to it. We also wanted to have such activities in connection with it that even those who are not especially interested in books would come to it and know that it belonged to them as much as to the bookish persons. We wanted an informal atmosphere, not confusion but freedom. Children cannot enjoy things together in absolute silence.

A stamp club seemed a good way to interest some of the "hard boiled" chaps who thought they did not like books. The librarian includes in her duties keeping the children informed about stamps, ordering stamps for them when they wish it, keeping up a school stamp album for their interest, and helping children with their stamp albums. Children of all ages come to the Tuesday-after-school stamp club.

Pupil Help Is Used

Another thing that has drawn many children to the library is the pupil help idea. Of course, high schools have their library clubs but most people seem to think that elementary children are too young to be of much use. Our idea in pupil help was not so much to help the librarian (though it does help a great deal) as to give the children the feeling that they were really a "part and parcel" of the organization. We have developed a sort of a club out of that. So many children wished to help that we had to have some limitation. Four persons from each fifth and sixth grades are chosen to help in their free time. There is no set schedule. When the librarian needs helpers she calls upon the club members. The club changes its personnel frequently so that all children may have a chance. The teacher makes the ultimate choice in the matter. The children do many kinds of work. They work at the desk, file, shelve books, take care of overdue books, fix the bulletin board and even mark books with the electric stylus. At their age helping in the library is an adventure. Even the tiniest ones say, "I wish I could learn to do it." The answer is always, "You can."

Then we wanted the library to be the center, in a way, of the creative work of the school. We believe in dramatics not to "show off" the child but to give him a chance to express himself. The library has proved a wonderful place for dramatizing stories.

In the first three grades the dramatization has been purely for their own pleasure. When in "Jack and the Beanstalk," the children "play" they are the beans that Jack received for

his cow, and these beans "grow" into the beanstalk, or when in "Peter Rabbit" one boy becomes a gooseberry net and another a watering can it certainly shows not only imagination but real creative ability. In the upper grades dramatization has usually ended in "playing" the story in an assembly, but only when the children demand it. The story is dramatized many times, giving each child a chance to play an important part.

This dramatization has not only helped children create parts and lose self-consciousness but has had a real value in helping them speak more clearly in public. In order to have the story understood the audience must understand what is said. The children know this. To us dramatization seems much more valuable than the play in which parts are learned and recited.

We have attempted to stimulate creative writing through the library. Part of the librarian's program has been to go into the classroom (at the teacher's request), when the teacher has felt unable for some reason to do it herself, to read poetry to the children and encourage them to write it. Children need little encouragement to write poetry. As one boy ambitious to become a prizefighter said after he had written quite a lovely poem, "I didn't know it was so easy."

In one instance, a story written in class was put into a book. The librarian's part in this was to help them study the parts of a book — designing, publishing, type, copyrighting. All of the pupils of the class took part in making the book. They came to the library to see how books were made, what introductions said and other features.

The library and music are definitely connected in our school. Believing that hearing music is the only road to appreciation, the librarian and music teacher have cooperated in bringing to the children some of the best music. When a class is studying the Middle Ages the librarian invites the group to the library. She tells the story of "Die Meistersinger" perhaps. The music teacher explains about opera and plays on the phonograph the Overture and Prize Song. Program pieces and songs are sometimes used in assemblies, the story being told and the music following after.

A less spectacular part of the librarian's work is to cooperate with teachers in "getting hold" of pupils who do not read. This is done by individual work with the pupils, careful choosing of books to suit the individual, trying to see that he reads a few of the things the whole world knows about. There is also the problem of the child who reads too much.

Our type of library has already proved itself. All children, from the above mentioned prizefighter to the little girl who reads and reads, come to the library. It is instilling in them a habit they will never regret. There is a Latin or Greek phrase that means, when translated, "whither all may come." I think that that phrase might be put over our library door.

Bus Economy, Comfort and Safety

Bus transportation in rural New York State has become a major consideration in school planning. Burton H. Belknap, supervisor of the rural education division, reports that 124,000 pupils were carried to school in busses in 1936-37, as contrasted with a mere 10,000 in 1928-29. This service involves common and consolidated, union free and central rural school districts and village superintendencies.

"The major increases," says Mr. Belknap, "have occurred in the transportation of high school pupils from common and consolidated districts since enactment of the law providing such service in 1930 and in the transportation of pupils in the rapidly increasing number of central districts."

Quite in keeping with these rapid increases in number of pupils transported have been the improvements in equipment used, Mr. Belknap points out in a recent issue of the bulletin to the schools of the University of the State of New York.

In the early days of transportation the few motor vehicles in use were almost entirely truck chassis with stock bodies whose fit as regards the chassis were much like the store shoes of an earlier day. Worst of all were the longitudinal seats in several rows.

Such an arrangement was later replaced by seating arrangements which provided longitudinal seats along the sides and all forward-facing seats down the center.

During the past three years all new equipment in New York State has been provided with all forward-facing seats, ample aisle space, better safety devices and, in a word, fine school bus performance.

Of the 7,434 conveyances in daily use at the present time, but 447 are horse-drawn and many of these are used for only a part of the time. Usually such conveyances are used during the winter months and for supplemental routes only. The average length of such routes is approximately four miles one way.

The considerable majority of transported pupils are accommodated by district-owned busses or busses operating under private contract. Public service companies also carry many pupils either on regular schedules or under private arrangements with the districts concerned. At the present time 5,359 separate districts are providing pupil transportation service.

With all this improvement one would naturally inquire as to the cost. While it is true that increased insurance requirements and improved bus equipment tend toward increased costs, yet the tendency toward cooperation between districts and replacement of several small conveyances with one large one have more than overcome the tendency toward increased unit costs, Mr. Belknap states.

The average bus also covers more than twice the earlier mileage owing to improved road conditions and more careful planning.

Careful planning and cooperation make it possible for 7,434 conveyances in daily use to transport 123,460 pupils over routes of 117,633 miles daily at an annual per pupil cost of $42.19, or an average cost of but one and four-tenths cents per pupil per mile. District-owned busses as well as public service conveyances operate at even lower unit costs.

Better Plant Practices • • •

Summer Work Marches On

No small job this of putting school equipment into camphor balls for the summer. Last month we stood by and watched preliminary proceedings in various plants. Now that the doors are actually closed, work is proceeding in earnest. Instead of the echo of children's voices down the empty corridors, there are the sharp metallic ring of hammers against metal, the whir and buzz of floor machines, the swish and swash of paint brushes. Let's see what it's all about.

First, General Inspection

Not a corner of the Leavenworth Central School at Wolcott, N. Y., escapes. Charles Welch, building superintendent, and his staff start in the last week of school with a complete inspection from the roof down. Cracks in the asphalt are filled in and the flashing repaired, mortar joints in coping and cap stones are raked out, calked and pointed up, all ventilating louvers oiled, air dampers inspected for leaks, motors oiled and cleaned where necessary, boilers cleaned and washed and furnaces repaired.

The next thing is washing the windows. Two men take a window, one inside, one out. Cleaning equipment consists of two pails, a combination squeegee with sponge rubber back, eight-inch blade. For outside work the window chair is used. It has been found safer and less fatiguing than the safety belt.

But we'll let Mr. Welch explain his procedure as we go along. "The next operation is cleaning walls, washing light globes and repairing cracks in plaster. Desks are washed, repaired and refinished. Then we clean our floors, which are wood block, asphalt tile, trowel mastic and concrete. They are thoroughly scrubbed with a machine, using a neutral oil soap with a small quantity of trisodium or some commercial preparation added to the water. After this they are given two coats of water wax and both are polished. We find this sufficient for classrooms until Christmas vacation. Corridors, of course, have to be done oftener. All the floors in the school receive this treatment and we find it very economical. The actual cost is about ½ cent per square foot, using first class materials.

"Our shop machines are cleaned and repainted. Exposed parts are oiled to prevent rust; sewing machines are cleaned, oiled and covered; drapes and carpets in the home economics department are dry cleaned and stored until needed; band instruments are polished; uniforms are dry cleaned, put into bags and hung in the band storeroom; minor repairs and adjustments on the typewriters are made by the instructor and at the end of three years they are replaced with new machines at a cost of $30 each. We have found this method more satisfactory and less costly than having them repaired. Our athletic equipment is repaired, dry cleaned and disinfected; leather goods are oiled, uniforms repaired and dry cleaned, after which they are placed on hangers until needed.

"Last but not least, all thermostats in rooms are tested, air filters washed and oiled, and vent dampers checked. We have been following this schedule closely for two years and find it works satisfactorily without conflicting or overlapping."

Protection Against Loss

It's not so easy, without a proper introduction, to wander through rooms in the schools of Rochester, N. Y. This holds true not only in summer but throughout the year. Rooms are locked at all times when the teacher or a member of the janitorial staff is not present.

Henry E. Wondergem of the board of education in Rochester points out that this rule is valuable in keeping things where they belong. "In general," he says, "we do not move a piece of equipment from the room where it belongs during the school year. Typewriters are protected by the usual typewriter cover during the summer, but the machines remain in the regular typewriting rooms. Exposed parts of steel equipment used in industrial arts classes are painted by the instructor with a light oil before being left for the summer. Motors, pulleys and working parts of machines are checked (upon request) by our department of buildings during the summer months as well as at other times.

"Sewing machines are checked by instructors before leaving for the summer, and requisitions sent in for needed refinishing or repairs. The machines are left in the locked home economics rooms.

"Band instruments are lent to pupils and are bonded by the board of education at a cost to the pupil of $2.50 per year. Pupils retain their instruments during the summer months. When a pupil graduates he gives up his instrument before he leaves for the summer, but with special permission he may retain the instrument for the summer. Uniforms are purchased by individual schools, not by the board of education. Their practice is to take in all such uniforms before school closes."

As It's Done in Troy

First, as Joseph T. Sproule, director of vocational education, Troy High School, Troy, N. Y., explains it, equipment and supplies in all departments are carefully inventoried. One copy of this inventory is left with the principal of the school, one in the teacher's desk, and the third kept in the supervisor's files. "This requires some clerical work," says Mr. Sproule, "but is of great value, especially if a change in the personnel occurs before school opens for the new term.

"Since most of our shop equipment is located in the basement or on the ground floor of the school buildings, it must have special care in order to come through the summer months without rusting or otherwise being damaged by the elements. We remove the belts from belt driven machines and apply a heavy coating of grease to the working surface of every machine. All hand tools are cleaned, sharpened and packed away in a dry safe place. Paints, stains, varnishes and other materials that are subject to deterioration are carefully sealed in proper containers and stored in a cool dry place. Sewing machines are cleaned, polished and oiled. All machines are covered to protect them from dust and dampness.

"All cooking utensils are thoroughly cleaned and packed away. The tops and other parts of stoves that are subject to rust are oiled. Staple supplies in the school kitchens are stored in glass or metal containers, and electric refrigerators are defrosted, cleaned and disconnected from the electrical supply for the summer.

"Then repairs to be made during the summer are listed. All unfinished projects are carefully labeled. Science laboratories are cleaned in every detail. Apparatus is checked to see that it is in working order and then carefully stored in cases. Care is taken to see that all chemicals are properly sealed in the right bottles or containers and arranged in order on the shelves of the stock room.

"In the commercial department repairmen go over all typewriters and business machines just before the June examinations. When the examinations are over the machines that are not to be used for summer school are stored in a dry clean place. In science rooms equipment is locked in cabinets."

Modern Kitchen Saves Time

THE new dining hall at Governor Dummer Academy, South Byfield, Mass., completed last fall, comprises part of a building campaign that will eventually form a distinctive campus unit. On the main floor of the attractive little brick building, painted white with slate roof and green shutters, is the dining hall. On the floor below is a thoroughly modern kitchen. When finally completed the unit will contain a large living room and a corridor of boys' rooms.

The dining hall is painted a light cream. Red curtains and a red molding stripe give it brightness and color. The ceiling, which is supported by a series of heavy rafters, is made of a sound-absorbing cork material.

Time-saving efficiency is the outstanding feature of the kitchen. The central unit of the cooking apparatus is located in the middle of the kitchen under a large ventilator which disposes of all cooking odors. A deep fat fryer, with a capacity of several gallons, is used for frying potatoes, meats and sea foods. A four-basket steamer is used for vegetables. Two ovenless ranges take care of boiled

1

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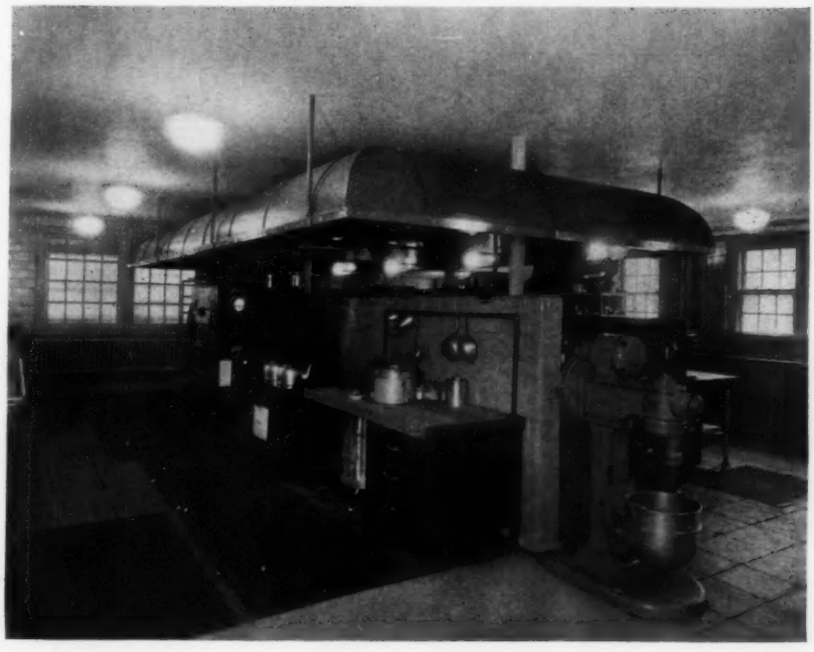


3

1 With its painted brick walls, slate roof and green shutters, the dining hall wing of the new building of Governor Dummer Academy forms a distinctive campus unit. 2 The ceiling of the dining hall, supported by a series of heavy rafters, is sound insulated. 3 In the middle unit of the kitchen under a large ventilator is the central unit of the electric cooking apparatus. (Photos by Haverhill Electric Co.)

foods, and two ovens are beside these, one for roasting and the other for baking. All cooking units are heated by electricity, which is controlled thermostatically at the various temperatures required.

To the right of the ovens is a utility range used for sauces and for light summer cooking. A mixer with a capacity of fifteen gallons is used for pastry and vegetables. Two large barrel-size containers hold flour and are conveniently located under the mixing table.

Tray wagons are utilized to transport the food to the conveyor which carries it up to the serving pantry off the dining room. Refrigerators insulated by cork within concrete shells are equipped with galvanized steel shelving. A constant temperature is maintained which can be regulated from 30° to 60° F. A separate, colder room handles ice cream manufacture and storage. Ice cream can be made here at the rate of 2½ gallons every twelve minutes.

In a sub-cellar under the kitchen the heating plant for the building is located. This room, which is completely separated from the rest of the building by heavy concrete walls, contains a large oil-burner and a completely insulated room in which all the electrical apparatus for the building is installed.

Since its opening the new kitchen has been of great interest to a large number of visitors. Estimated cooking cost of each meal is less than 1 cent per person. Several hundreds of meals are served daily under the supervision of Joseph F. Snyder, who is household director.

Food is delivered from kitchen to serving room by conveyor.

Variety in College Meals

By MARY ELLA POOL

The culinary department in a university must equal, if not excel, ordinary adult food standards, because of the contagious dissatisfactions that arise among students.

TO FEED satisfactorily a group of 50 to 500 active college students is a pleasant, challenging, time-consuming job. Feeding the college boy or girl is similar to the nourishing of other people. Some like dried beans while others like only a beverage and salad for luncheon. Just as in any nonsegregated group, desires are varied and the dietitian must supply a quantity and assortment of comestibles, that customers may be pleased most of the time.

This is accomplished more easily in cafeteria or short-order establishments. A variety may be supplied without the disadvantages of family service used in dormitory dining rooms. A cafeteria catering to a large student body, and perhaps to some townspeople, must offer expensive foods as well as inexpensive ones to maintain patronage. The school cafeteria must help the person who has little to spend for food. A plate for 15 or 20 cents may be carefully planned so that it is filling and gratifying. A customer may quickly grow tired of this type of meal, since a great variety of foods cannot be included on this plate, and it should be served only at noon.

Although a student may buy a lunch for almost any price, he likes chicken, salads, and out-of-season vegetables. The price is too dear for him, but he will not pass them by. Then he broadcasts how expensive it is to eat at the university cafeteria, since the managers are conducting it solely as a money-making institution. This is followed by the idea that students should alternate in running the culinary department of the university, which serves 3,000 meals a day. Although students have no training, it would appear to be an appropriate place to learn. The dietitian might ignore this fancy, but it usually is aired in the school paper as news, editorial and student pulse.

Many students do not rise early for breakfast and combine the noon and morning meal to save money. A short order service unit may be set up in connection with the cafeteria to serve "brunch" and in-between class orders. The institution will then contact a large portion of the student body other than regular cafeteria patronage.

Student group dinners should be arranged by the management of the commons. This adds interest to the

daily routine of cafeteria service, although banquets are additional work. However, it can be profitable, pleasant and interesting work for the director, and good training for the students in charge if they are required to make complete and definite arrangements.

The college dormitory and dining room offer directors opportunity for instructing students. A student should hold his standard of living on a high plane or even improve it. A dormitory should never be so large that students fail to receive the personal supervision of the staff. Just as essential as serving food correctly, is training students in conduct during the meal. They should learn what conversation will be an interesting change from talk of studies. Pleasantness will increase enjoyment and appreciation of the food, whereas complaining invites finding fault with the meal. A meal consisting of well-cooked, correctly seasoned, attractively served food will aid in promoting congenial and enjoyable conversation.

Special dinners on holidays, birthday celebrations, program and costume dinners, picnics, teas and buffet suppers for residents of the dormitory will be a great pleasure to the students and will be a joy, at the cost of only a little worth while trouble.

Stubs Exchanged for Food

PAPER food checks instead of brass slugs are being used with success in the Keating Hall cafeteria of Fordham University, New York. The plan is simple. The student enters the enclosure at either end, right or left, where he receives his food check. This check is merely a slip 1¼ by 8 inches containing 50 cents worth of 5-cent stubs. Provision is made for 5-cent extras totaling an additional 25 cents, also 2-cent extra items, such as an additional pat of butter, totaling 10 cents worth of extras. Colors are changed daily. Another check is provided for charge accounts or for free meals served to groups and paid for by some campus organization.

The student passes down the line exchanging as he goes the correct number of 5-cent stubs for his items of food. Each time he tears off stubs, the last remaining stub shows the amount he will pay the cashier at one of the two exits located directly in front of the soda fountain.

These food checks are not bought. They have no money value. They are merely a medium of exchange for food, and a self-indicating record of the amount due. A large "5 C" on each stub shows the rate of exchange. Small figures on the side show the amount due.

This system of tearing off a 5-cent stub for a 5-cent item, two 5-cent stubs for a 10-cent food item and three 5-cent stubs for a 15-cent food item and handing them over the counter to the clerk for food makes unnecessary any delay in purchasing with the checks, unless the trayful exceeds 50 cents worth. In such instances the extras are punched.

"In addition to the obvious advantages in this food check of decreasing delays, such as a double pass of the check over the counter for punching, tray checking by cashiers and other similar hindrances," the Rev. Robert E. Holland, supervisor, explains, "there is the further advantage to the office of an automatic check on sales, for the amount represented by stubs collected must agree with the amount represented by the heads collected. Furthermore, since each counter server audits her own stubs, there is an immediate breakdown of sales for the record and thus there is an accurate thermometer applied to each sales unit of the service. At a glance we can tell how much is sold at what point. Also by changing colors for different periods of the day, a tally on this or that group of buyers can be made. Employees' meals are dispensed on white checks as are complimentary meals.

"Formerly brass slugs were used. There are many advantages in the

KEATING HALL CAFETERIA
FORDHAM UNIVERSITY

DAILY COUNT OF STUBS

DATE:

Number of 5c. Stubs:

COLOR: ✓

Buff ☐ Blue ☐ Green ☐
Salmon ☐ Cherry ☐ White ☐

SERVICE: ✓

Cold Tray – No. 1 ☐ No. 2 ☐
Sandwich, Dessert – No. 1 ☐ No. 2 ☐
Steam Table, Griddle – No. 1 ☐ No. 2 ☐
Beverage – No. 1 ☐ No. 2 ☐
Fountain – No. 1 ☐ No. 2 ☐

Time: From To

Name:

HAND THIS ENVELOPE TO STEWARDESS.

KEATING HALL CAFETERIA
Fordham University

FOOD SERVICE VOUCHER

Name .....

Acct. No. ..... Amount .....

No. 386 ☐

Paper food checks and other cafeteria forms used successfully at Keating Hall, Fordham.

new system over brass slugs. The latter are insanitary; they have monetary value always — even while in transit back to the management for resale. They have been found in telephone pay station boxes. They defeat sales, because if a boy has not enough in hand, he will pass up a purchase rather than go purchase more slugs, or he will hold up the line to buy some from a fellow. On the contrary, our food checks are perfectly sanitary as they are used once only and then destroyed. Being only a medium of exchange and an automatic record of amount due, they represent no monetary risk to management or temptation to employees."

Invitation to a Tasting Party

By HELEN D. ROSSI

VERY young children learn to use and appreciate the service of the cafeteria in an elementary school through early training and guidance in the right selection of food. Through a series of tasting lessons developed by the school dietitian under the direction of the school principal, children become individually acquainted with new and unfamiliar dishes served in the school cafeteria at Flynn Park Elementary School, University City, Mo.

These tasting lessons are given each year for a period of several weeks at the beginning of the school term in September and January. The first and second grade pupils, ranging in age from five and one-half years to seven years, participate in this activity. The new dishes in the cafeteria, which have been successfully introduced to children through the tasting lessons, are potato soup, creamed eggs on toast, Irish stew, butterscotch pudding, caramel custard and egg salad sandwiches. Sample sandwiches for tasting lessons are made on rye, whole wheat and white bread. One-inch square sandwiches are held together by means of toothpicks. Children take hold of the toothpick when conveying the sandwich to the mouth.

Tasting parties are arranged periodically for small groups of young children. Individual written invitations are given to these children by the school dietitian and cafeteria manager. The children enjoy this personal attention from someone outside the classroom and look forward with much enthusiasm to an invitation to another tasting party.

After having participated in the tasting lesson activity it is not necessary to urge children to select certain nutritive foods. The developed association of taste and food is a great help when the child is given the responsibility of selecting his own food. The child selects those dishes with which he is acquainted. The food smells good, it looks good, it tastes good and it is good and, in addition, it is a good seller.

FOOD FOR THOUGHT

• The student managers' training course conducted by the school lunchroom department of the Detroit board of education is now available to home economics graduates of colleges and universities. Only those students who have majored in institutional management will be considered. The course approximates an internship, covering all phases of the work required of a manager, and affords the student an opportunity of working in every capacity from cleaning to management. An entrance examination is required, consisting of two parts, one a written examination covering institutional management knowledge; the other a personal conference with the lunchroom department director and supervisor. Application may be made to take the examination when offered. Mrs. Elizabeth Miller is the director of school cafeterias.

• The same precautions used in closing a home when the family is to be away for the summer are used by home economics teachers in Louisiana schools at the end of the term, under instructions from Clyde Mobley and Lela A. Tomlinson, state supervisors attached to the state department of education. Two or three days are used in closing up the department, the activities being used for learning experiences. Inventories are taken, equipment is cleaned and stored, furnishings are cleaned, placed in order and protected from insect pests and possible abuse and destruction. Silver is placed in a safe in the principal's office or in a safe place in the community. When these departments open again in the fall another two or three days of the pupils' time will be used in making the department a homelike place in which to live and work.

• In a number of Ohio high schools where the elementary school children occupy the same or an adjacent building two girls and two boys from the sociology classes are assigned to assist the younger and the underprivileged children who are fed in the school cafeteria. Their duties consist of supervising face and hand washing, combing hair and the like. They mingle with the group, talk with the children and try to teach them consideration for their playmates and proper conduct and table manners while eating.

• To some 1,200 school children in Nevada the noon dismissal bell means not a long trek home, a hurried lunch and a dash back to school, but a bowl of rich soup well flavored with meat and plenty of vegetables—the kind of soup for which one would be glad to walk blocks, but which is served right in or near the school building.

Fostered by the WPA in twenty communities of the state, the project is likewise sponsored by the state department of education and the local school boards, and some projects have parent-teachers' associations and women's relief societies as sponsors. In the twenty communities lunch is served in school buildings, churches, town halls, lodge rooms and private homes.

The WPA school lunches are not limited to a bowl of soup, but consist of an entire well-balanced noon meal, according to Louise K. Springer, supervisor of the school lunch for the WPA. Standard menus consist of a substantial protein dish of meat, fish, eggs, cheese, a generous helping of vegetables, a starchy food, usually sandwiches, a dish of fruit and a beverage of milk. A second serving is always available.

"Boy, I could live on this," wholeheartedly remarked an underweight child during his first lunch, Mrs. Springer reports.

Gains in weight and in the general physical condition of the children have been evident, as has been the improvement in their attitude toward school work with a resultant upward trend in scholarship.

EVERY CHILD DESERVES THE

DOUBLE PROTECTION

OF GOODYEAR TIRES!

LIVES ARE PRECIOUS—equipment costly. Both deserve every consideration to protect them against possible accident.

And with safety resting largely upon the tires they travel on—you can't afford to take chances with anything less than the safest tires made.

Goodyear's greater safety is known the world over. These sturdier, longer lasting, scientifically-designed tires give protection against both skidding and blowouts not equalled in any other tires.

The deep, tough, gripping diamonds of the All-Weather tread provide positive grip for emergency stops—sure-footedness on wet or muddy roads.

And only Goodyears give you Supertwist Cord construction—surest of all safeguards against blowouts—*blowout protection in every ply.*

For safety's sake, specify Goodyear Tires on your new busses—or for replacements, whether on your own or contract equipment.

LIFEGUARD* TUBES

Infallible protection against results of blowouts is provided in Goodyear LifeGuard* Tubes. They make blowouts as harmless as slow leaks because—should a blowout occur—the "inner tire" supports the load and gives driver ample time to bring bus to a slow stop under full control.

*TRADE MARK REGISTERED

THE GOODYEAR TIRE & RUBBER COMPANY, INC., AKRON, OHIO

MODERN GOODYEAR RIMS ARE SAFER—SAVE TIME, TIRES, MONEY! SPECIFY GOODYEAR RIMS ALWAYS!

NEWS IN REVIEW • • • •

President's Advisers

The President recently announced that he had requested the advisory committee, headed by Floyd W. Reeves of the University of Chicago, to give more extended consideration to the whole subject of federal relationship to state and local conduct of education, and to give him a report before the beginning of the next session of Congress.

The committee originally was appointed in September, 1936, and was instructed to "study the existing program of federal aid for vocational education, the relation of such training to general education and to prevailing economic and social conditions, and the extent of the need for an expanded program." The committee has hitherto been known as the President's Committee on Vocational Education, but in the future will be designated as the Advisory Committee on Education.

The scope of the committee's present assignment is comparable to that of the National Advisory Committee on Education appointed by President Hoover, which in 1931 presented an extensive report on federal relations to education. Since that time numerous new problems have arisen as the result of the efforts of the states and of the federal government to cope with widespread depression. Fortunately, much more information is now available for consideration in solving national education problems, and there appears to be greater interest in those problems than formerly on the part of Congress and the public.

The present advisory committee on education differs from the old national advisory committee in that it is primarily a group of laymen, although it includes a number of distinguished educators. The members of the committee, in addition to Chairman Reeves, follow:

W. Rowland Allen, personnel director, L. S. Ayres & Company, Indianapolis; Dr. Edmund deS. Brunner, Teachers College, Columbia University; Oscar L. Chapman, assistant secretary, U. S. Department of the Interior; Elizabeth Christman, secretary-treasurer, National Women's Trade Union League, Washington, D. C.; Gordon R. Clapp, director of personnel, Tennessee Valley Authority; Ernest G. Draper, assistant secretary, Department of Commerce.

Alice L. Edwards, home economist, New York City; Henry Esberg, New York City; Dr. Mordecai Ezekiel, economic adviser, U. S. Department of Agriculture; George L. Googe, chairman, southern organizing committee, American Federation of Labor; Dr. Frank P. Graham, president, University of North Carolina; Dr. Luther Gulick, director, Institute of Public Administration, New York City; the Rev. George Johnson, director, department of education, National Catholic Welfare Conference.

Dr. Charles H. Judd, chairman, department of education, University of Chicago; Thomas Kennedy, secretary-treasurer, United Mine Workers of America; Katharine F. Lenroot, chief, Children's Bureau, U. S. Department of Labor; Dr. Arthur B. Moehlman, University of Michigan and editor, The NATION'S SCHOOLS; Dr. Henry C. Taylor, director, Farm Foundation; T. J. Thomas, president, Valier Coal Company, Chicago; John H. Zink, president, American Society of Heating and Ventilating Engineers, Baltimore, and Dr. George F. Zook, president, American Council on Education.

TRIBUTE

Passing of Stetson

Paul Clifford Stetson, a brilliant young administrator and outstanding educational leader, died suddenly of heart failure on June 1. Apparently in the best of health, he had recently accepted reelection to the superintendency of the Indianapolis public schools for another five-year term.

Paul C. Stetson

Born in Logansport, Ind., on June 21, 1884, he lacked a month of being 53 years of age. His father, the Rev. Herbert Lee Stetson, who died at an advanced age several years ago, was both minister and educator. He served many years as president of Kalamazoo College.

Paul decided at an early age to become a teacher. His undergraduate work was taken at Kalamazoo College and the University of Chicago. He completed his master's degree at the University of Chicago in 1917, and was honored with the doctorate by Butler University in 1932.

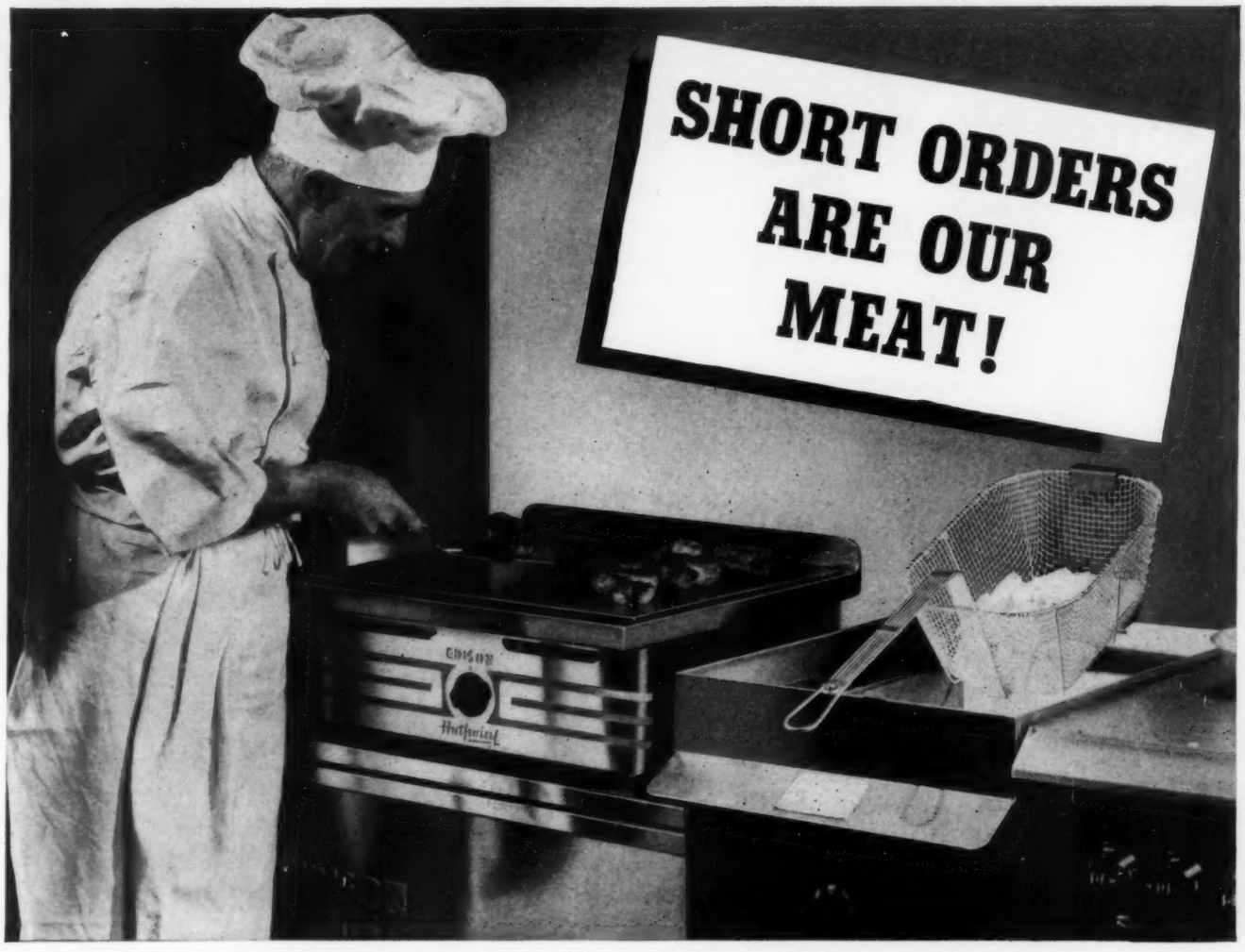
His active professional life included high school principalships in Michigan at Bangor (1907-08), Big Rapids (1908-09) and Grand Rapids (1911-18). He served two years (1909-11) as superintendent of schools in Big Rapids. He left Grand Rapids in 1918 to accept the superintendency of schools at Muskegon, Mich., where he remained for three years. Called to the Dayton superintendency in 1921, he remained there for nine years until elected superintendent of schools in Indianapolis in 1930.

In addition, he found time to serve as a member of the New York City Survey in 1924 and the West Virginia Survey in 1928. He was also a trustee of Franklin College, Indiana. He became a member of The NATION'S SCHOOLS staff with the first issue. Since 1935 he has been a member of the editorial board. He was a frequent contributor of strong editorials and articles.

In both the National Education Association and the American Association of School Administrators he exercised unusual leadership, receiving the presidency of the latter group in 1933. His last big work was the chairmanship of the committee on longer planned programs. His chief contribution was advocacy of the change in name from the older title of Department of Superintendence and his insistence on eliminating politics from the presidency. Both these changes were adopted at the New Orleans meeting.

His leadership developed not only from his forceful personality but from his frankness, honesty, and moral courage in meeting difficult situations. Never a man to weasel or to "pass the buck," difficult problems always found him squarely aligned in terms of what he considered sound principles. Once determined on a plan of action, there was little that could prevent him from fighting to the finish. Those who knew him intimately understood and admired his procedure. Others were often amazed at his energy and forcefulness.

He was distinctly progressive in his educational outlook but his practical



The G28 *Griddle and* K15 *Fry Kettle build short order business at low cost*

New Automatic Heat Manager Control Cuts Cooking Costs

PUT more speed and better profits into handling short orders with Edison's New G28 Griddle. The new cast iron top is perfect for grilling and is easy to clean. The new Heat Manager control keeps the plate at the right temperature for the orders you're working on — no more, no less.

Dial, clearly marked in degrees, is set by you at heat required for food to be cooked. Calrod quick-heating units and the supersensitive Heat Manager keep the temperature at that point. Edison's amazing new control works like magic. Current goes on and off automatically: ON, when you put food on the griddle; OFF, when food is removed. Just as simple as that. It's always ready. It never forgets. Begins saving with the first thing you grill.

Make short orders *your* meat too and get some real "gravy" out of them by installing this time-saving, fuel-saving, food-saving automatic electric griddle. Small space required makes it ideal for back-bar use as well as regular restaurant service. Prices are greatly reduced and this new Griddle will pay for itself in savings alone.

Use coupon to get full information on how this remarkable Griddle can increase your short order profits.

EDISON GENERAL ELECTRIC APPLIANCE CO., Inc.
5696 W. Taylor Street, Chicago, Illinois
World's Oldest and Largest Makers of Electrical Cooking Equipment

Learn how this new compact G28 electric griddle can turn a back-bar or other non-revenue space into money-making short order service.

EDISON

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CANADIAN GENERAL ELECTRIC COMPANY, LTD., TORONTO

Edison General Electric Appliance Co., Inc., 5696 W. Taylor St., Chicago

Please tell me, without obligation, how your new Automatic Heat Manager Electric Griddle can make my short order business more profitable.

*Name*_____

*Address*_____

*City*_____ *State*_____

mind always insisted on testing the soundness of an idea before accepting it wholeheartedly. A shrewd judge of men, he never failed to surround himself with strong-minded individuals to whom he gave full credit for achievement.

His ability and outstanding personality are a distinct loss to public education and to his many friends to whom his courage, honesty and sincerity endeared him.—A.B.M.

RADIO

Broadcast from Japan

The National Broadcasting Company will cover the seventh world conference of the World Federation of Education Associations in Tokyo, Japan, August 2 to 7, in the first series of programs ever to be broadcast from the Land of the Rising Sun. The Broadcasting Corporation of Japan will cooperate with NBC in this 6,700-mile broadcast. Harry A. Carpenter, scientist and faculty member of the West Side High School, Rochester, N. Y., will represent the NBC at the conference and will take active part in the science section of the conference. In one of two talks he will make at the meeting he will discuss "American Educational Broadcasting."

Mr. Carpenter will introduce his fellow delegates as speakers during the NBC educational features broadcast from the meetings. The theme of the broadcasts will be based upon the ideal of better international understanding.

Schools Are "Aired"

Six radio programs have been produced by the public schools at Evansville, Ind., during the past school year in which pupils, teachers and educational leaders have participated.

Journalism pupils wrote script and produced a series of fifteen-minute newscasts during the past year. "You and Your Schools," a series of half-hour programs sponsored by the school radio committee included pupils and teachers of all schools, and continued from November until May. During American Education Week, educational leaders in Evansville explained the significance of the celebration through another series of broadcasts.

A series of seven fifteen-minute programs, "Answer Me This," an educational question-and-answer game sponsored by the public school radio committee, began on April 9 and continued until May 28.

Each Wednesday morning in May and part of June the Lincoln High School and elementary schools broadcast programs from the Lincoln auditorium.

A day has been set aside for each high school of the city by Station WEOA during which student talent is used.

Fifteenth Anniversary

Ohio State University's broadcasting station, WOSU, celebrated the fifteenth anniversary of its entrance into the educational radio field on June 3. It was in 1922 that the campus radio outlet was given a broadcasting station license with the call letters, WEAO, but a "wireless station" had been in existence on the campus for a decade previously.

Cleveland Takes Lead

Installation of an ultra-shortwave transmitter to be used in reaching all of the public schools of the Cleveland system is being contemplated, according to Assistant Superintendent H. M. Buckley. If Cleveland carries out its plan, it will be the first city school system to take advantage of the ultra-shortwave band which John W. Studebaker, U. S. commissioner of education, requested set aside for educational use. It is probable that a single receiving set will be installed in each school building so that programs can be distributed within the building over the existing public address system. All broadcasting of the Cleveland public schools is designed for classroom reception.

School Studio

From a well equipped studio in the Jeffersonville High School, Jeffersonville, Ind., all departments and organizations of the school system may broadcast regular programs and school news. Groups and individuals with special training and interests are given the same opportunity. Radio time on the air has been proffered the schools by Station WGRC. Principal H. B. Vorgang, who is well versed in the science of radio, is an able announcer and program director.

Programs are varied. The glee club, band and orchestra present regular concerts. A journalism class presented a series of short plays. The commercial club broadcast meetings attended by leading business men, who were guest speakers. The Student Council, Hi-Y Club, Girl Reserves, science department, and all other departments and clubs, and the grade schools are allotted time for appropriate presentations.

Coming Meetings

July 5-16—Conference on Elementary Education, Ann Arbor, Mich.

July 26-31—Institute on Parent Education, University of Denver.

Aug. 2-6—Conference on Assisting the Unadjusted Pupil, Cornell University, Ithaca, N. Y.

Aug. 2-7—World Federation of Education Associations, Tokyo, Japan.

Sept. 26-28—New York Council of School Superintendents, Saranac Inn, New York.

Oct. 7-8—Michigan Educational Association: Region 5, Alpena; Region 7, Sault Ste. Marie.

Oct. 7-9—Vermont State Teachers' Association, Rutland.

Oct. 11-15—National Association of Public School Business Officials, Baltimore.

Oct. 14-15—Michigan Education Association: Region 2, Flint; Region 3, Jackson.

Oct. 14-15—Minnesota Education Association: Northeast Division, Hibbing.

Oct. 20-23—National Council on Schoolhouse Construction, Columbus, Ohio.

Oct. 21-22—Indiana State Teachers' Association, Indianapolis.

Oct. 21-22—Michigan Education Association: Region 6, Detroit; Region 8, Battle Creek.

Oct. 21-22—Minnesota Education Association: Central Division, St. Cloud; Northern Division, Bemidji; Southeast Division, Winona; Southwest Division, Mankato; Western Division, Moorhead.

Oct. 21-23—Utah Education Association, Salt Lake City.

Oct. 27-29—North Dakota Education Association, Minot.

Oct. 27-30—Nebraska State Teachers' Association: District 1, Lincoln; District 2, Omaha; District 3, Norfolk; District 4, Grand Island; District 5, Holdrege, and District 6, Scottsbluff.

Oct. 28-29—Maine Teachers' Association, Portland.

Oct. 28-29—Michigan Education Association: Region 4, Grand Rapids.

Oct. 28-30—Michigan Education Association: Region 1, Detroit.

Oct. 28-30—Rhode Island Institute of Instruction, Providence.

Oct. 28-30—Wyoming Education Association, Thermopolis.

Oct. 28-30—Colorado Education Association, simultaneous meetings at Denver, Grand Junction and Pueblo.

Oct. 28-30—Montana Education Association: Western District, Kalispell; Southwestern District, Butte; Eastern District, Miles City; North Central District, Great Falls.

Oct. 29—Connecticut State Teachers Association, simultaneous meetings at Hartford, Bridgeport and New Haven.

Nov. 4-5—Arkansas Education Association.

Nov. 4-6—West Virginia Education Association, Clarksburg.

Nov. 4-6—Iowa State Teachers Association, Des Moines.

Nov. 5-6—Kansas State Teachers Association, simultaneous meetings at Lawrence, Manhattan, Dodge City, Hays, Parsons and Wichita.

Nov. 12-13—Arizona Education Association, Tucson.

Nov. 12-15—New Jersey State Teachers' Association, Atlantic City.

Nov. 14-17—Association of Land Grant Colleges and Universities, Willard Hotel, Washington, D. C.

Nov. 17-20—Missouri State Teachers Association, St. Louis.

Nov. 18-19—Delaware State Education Association, Wilmington.

Nov. 18-20—Louisiana Teachers Association.

Nov. 22-23—New York State Education Association, house of delegates, Jamestown.

November (Thanksgiving Week)—Virginia Education Association, Richmond.

Nov. 21-24—South Dakota Education Association, Sioux Falls.

Nov. 25-27—Texas State Teachers Association, Houston.

Nov. 26-27—Idaho Education Association.

It Pays to

HEED TRAFFIC SIGNALS

Are you watching—and heeding—the traffic signs in your building? The tramp of thousands of feet in the hall indicates Traffic Seal. A classroom may require Gloss Seal. Corridors may need to be scrubbed. An office floor needs waxing. In all cases there are sure signs pointing to the right method and the right material.

It's just as important to heed the traffic signs in your building as to watch the "stop" and "go" lights on streets and highways. Scarcely any cost of traffic violation can approach the cost of floor neglect.

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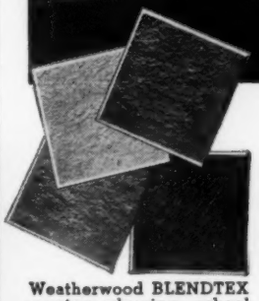

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FINANCE

Restore Salaries

Full restoration of salaries to predepression levels and the inauguration of an old-age security program through the Teachers Insurance and Annuity Association have been announced for the Oregon State System of Higher Education by Dr. Frederick M. Hunter, chancellor. These steps were made possible through legislative enactment providing $1,000,000 more than the regular millage levy. Both are applicable throughout the entire system, including the University of Oregon, Oregon State College and three normal schools. Appropriations for 1937-38 are nearly up to the 1929-30 level.

School's Default Upheld

Recently the supreme court of Kansas ruled on the case of a teacher who held a contract for a $880 a year salary, in a district that collected only $754.01 in taxes. The court reversed the decision of the district court and held that because of the cash basis law the school could not make a contract creating a debt. The teacher consequently could not collect the total salary as provided by the contract.

To "New School"

To the permanent endowment of the graduate faculty of the New School for Social Research, New York City, or the "University in Exile," a grant of $100,000 has been made by the Lucius N. Littauer Foundation, Inc. The income from this fund will apply toward the $212,000 sustaining fund now being raised to finance the graduate faculty through the academic year ending in 1939.

Half-Million to Carleton

Frank B. Kellogg, Secretary of State in the Coolidge cabinet, has given the sum of $500,000 to Carleton College for establishment of a foundation for study of international relations. Announcement of the gift was made at the commencement exercises by Associate Justice Pierce Butler of the U. S. Supreme Court, who gave the commencement address.

Credit Rating of Pupils

John S. Furniss, who is circulation adviser of school publications in the high school of Abington, Pa., has devised a method of keeping a cumulative record of pupils' faithfulness to financial obligations. Every homeroom teacher records on a report sheet the amount each pupil pays on his subscriptions. Sheets are turned in to Mr. Furniss at the end of each term, to be placed on a permanent financial card. This card is kept on file throughout the pupil's high school life.

Release Penalty

A teacher who resigns on or after July 1 of the year in which he is elected must pay the school district of Audubon, Iowa, $30 for his release, according to a recent ruling of the board of that school district.

ADMINISTRATION

Seventy-Day Sick Leave

One of the most liberal sick leave plans to be found in any American city is that adopted by the board of education of Kearny, N. J., providing that all full-time school employees shall be allowed a cumulative sick leave to a maximum of seventy working days. The plan was developed and recommended by Dr. Edmund L. Tink, superintendent of schools.

More Power

More power to the superintendent of schools in New York City was granted recently by revision of the by-laws of the board of education designating the superintendent as "the chief executive officer of the board of education and of the educational system."

This results in shifting of power from the board of superintendents and gives more authority to the superintendent of schools. Also, more of the school duties will be centralized in the superintendent's office. The board of education itself has taken over some of the powers formerly held by the associate superintendents.

The board of superintendents wi'l lose the right to grant or deny leaves of absence to teachers; to recommend changes in the kind or grade of schools; to recommend the selection of school sites or changes in the boundaries of local school board districts; to recommend library books; to recommend certain materials needed in the classrooms and offices; to recommend attendance officers.

The board will retain power to prepare new syllabi; to recommend the content of courses of study; to regulate the promotion and graduation of pupils; to transfer teachers from one school to another, and to make recommendations concerning probationary teachers.

INSTRUCTION

Harvard's Venture in History

An "extracurricular" program of study of United States history, open both to college students and to the general public, with competitive examinations and prizes, is being inaugurated by Harvard University.

The experiment is the first step in a project outlined by President James B. Conant in his recent annual report, to counteract the widespread attitude that "the only road to knowledge lies through formal instruction administered by a college or university."

A committee of Harvard professors in American history and literature, appointed last autumn, prepared a comprehensive reading guide for both elementary and advanced study of United States history, and this is available to voluntary students. This syllabus comprises a list of readings on various subjects, which will be supplemented from time to time with new books in the field. Courses of public lectures on the history and civilization of the United States may be arranged by members of the staff and distinguished visiting scholars, writers, critics and men of affairs.

Examinations will be held each year, providing standards by which each individual may measure his progress and a basis for awarding prizes for the best independent work.

Extracurricular Traffic Court

Much interest has been manifested by members of the Hi-Y Club of the F. J. Reitz High School, Evansville, Ind., in safe driving. The boys have organized a traffic court, with judge, jury, prosecutor, clerk and bailiff, for the purpose of trying anyone connected with the school who has been caught violating a traffic law or regulation.

Every member of the club is a traffic officer duly authorized to report violations of traffic regulations to the prosecutor. Traffic officers are instructed to collect as much evidence as possible and to obtain the names of witnesses, thus aiding the prosecution. Conviction carries with it proper publicity in the school paper. In case the convicted one is a member of the Hi-Y Club, appropriate "extra duties" are assigned. The court meets bi-weekly to deal with offenders, or, in an emergency, upon special call.

Boys' Behavior

Behavior problems of children enrolled in the University of Michigan Camp for Boys listed in order of frequency are disinterest, defiance to discipline, bullying, unpopularity with other children, infantile behavior, homesickness, temper tantrums, truancy, enuresis, lying, selfishness, tardiness, stealing, obscene notes, marked overactivity, cheating, sex offenses and speech difficulties.

Dr. Harry R. Meyerding set out to discover the kinds of behavior prob-

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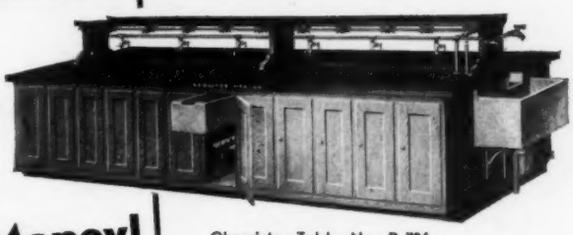

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After a thorough investigation of the evidence for and against at the close of the last period of acceptance, the Council on Pharmacy and Chemistry of the American Medical Association again reaccepted (1935)

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lems presented in camp by boys who are considered problem cases in school, and the relationships between age, intelligence, health, socio-economic, emotional and problem tendency scores.

The data for each boy include fifty-three observations of his behavior and his reactions to more than 300 objective questions and situations.

Put a Nickel in the Slot

An arithmetic lesson with a decidedly moral flavor is an innovation in the eighth grade at Riverside, Ill., one of Chicago's western suburbs, where arithmetic is being taught with the aid of a slot machine. The machine has been installed to prove to pupils that no matter how many nickels they may invest, they can't get as many back. L. J. Hauser, superintendent of the school, said the machine was being used with the knowledge and consent of the suburb's parent-teacher association, and that there has been no complaint about the innovation.

Michigan Conference

An enlarged program in elementary education which is being offered at the first conference on elementary education at the University of Michigan, July 5 to 16, may be attended by anyone who directs the work of children in the elementary school system—teacher, principal, supervisor and superintendent. Dean J. B. Edmonson has selected as a faculty for the first conference a group of professors nationally known in elementary education. The university elementary school will be in operation and may be observed by a system of observational balconies. Six units of children from three to fourteen years of age will be in class.

Add Fifty Courses

More than 350 courses in education, including fifty new courses, will be offered at Teachers College, Columbia University, during the summer session beginning July 12, according to Dr. Walter E. Hager, secretary. Among the new courses is one in the prediction of professional success, in which methods will be studied for determining what chance a graduate student has of being successful in his chosen profession. Other new courses include prevention of juvenile delinquency, conservation of natural resources, geography of race and culture, the activity program in sight-saving schools and revolution and reform both in American thought and in feeling.

Remedy for Cheating

Somewhat disillusioned after making a survey in cheating among his own pupils, E. V. Lincoln, instructor in Triangle High School, Lane County, Oregon, submits a substitute for the present system of grading, which he believes responsible for cheating.

Based upon the theory that some children have neither the capacity nor desire to do regular high school work, Mr. Lincoln would observe a high school freshman for thirty days, and then recommend that he either be retained in the school for academic work or sent, at public expense, to a trade school in an effort to determine his particular mechanical talent.

As another point in the program, Mr. Lincoln suggests the elimination of the practice of assigning marks. Instead, each day, the best examples of written work shall be posted for public scrutiny. Poor work shall go unnoticed. Any good work done by a pupil would then be communicated to the student body with dignity.

Summer Workshop

A maximum of sixty students will be accepted by the Radio Workshop of New York University for its summer session, July 6 to August 14, according to Dr. Carl E. Marsden, division of general education of the university. Requests for admission should include data concerning the applicant's training, experience and present occupation, and must be accompanied by a $5 registration fee. The cost to each student is $50 for the complete course.

Courts Bar Negress

The Maryland Court of Appeals recently refused to order Baltimore County to admit a Negro girl to the Catonsville High School. The county now pays tuition for Negroes to attend high school in the city of Baltimore. Such tuition is paid only after pupils pass examinations. The girl did not pass the entrance examination and her father brought suit, contending she was qualified to attend high school, but was ruled out at an examination not required by law and not provided for both races equally. The lower court refused to order admittance of the girl, and the appeals court upheld that refusal.

TRANSPORTATION

Progress in Virginia

Transportation of school children may justly be criticized for the weaknesses inherent in a new and rapidly growing institution, but measured by improvements and progress, Virginia's transportation has a spectacular record, according to Dr. Sidney B. Hall, state superintendent of public instruction. "The great gain in quality of service, attained between 1929 and 1936 while the cost per pupil transported was being reduced from $21.16 to $10.38 per year, is a real achievement," Doctor Hall said. "In ten years the number of pupils transported has increased from 52,684 to 120,360, and the cost during 1935 and 1936 was $1,296,750."

Iowa's Bus Provisions

Iowa's new motor vehicle law, which becomes effective July 4, has four important provisions pertaining to school busses: (1) it authorizes three-year contracts with bus drivers; (2) it requires all school bus drivers to hold a regular chauffeur's license (if the driver is under 18 years of age, but not under 16, only a limited chauffeur's license may be issued); (3) it limits the speed of a school bus to 35 miles per hour, and (4) it requires all school busses to stop at railroad crossings.

Fifteen Free Lessons

Fifteen safety lessons in the use of school busses are being offered free to American and Canadian schools by a manufacturer specializing in school bus bodies. Each lesson covers a detailed feature of safety. The series begins with an introduction to the modern school bus, and how to use it to its safest advantage. Detailed use of its safety features are outlined, covering approach, ride and exit. The series then explains how general traffic readjustment must be made to fit the enlarged transportation scope of a centralized school.

PUBLICATIONS

Covers Nation

Reappearing under the direction of a new editorial board, *Understanding the Child,* a magazine for teachers, is now published by the National Committee for Mental Hygiene and the Canadian National Committee for Mental Hygiene. This magazine was published from 1931 through 1935 by the Massachusetts Society for Mental Hygiene and enjoyed a wide distribution among teachers.

Dr. Henry B. Elkind, the editor, is head of the advisory editorial board, comprised of outstanding American and Canadian educators and mental health leaders.

House Organ

The *Washington County School Journal,* "a publication devoted to an exchange of news and ideas among the public schools of Washington County, Kansas," made its début recently. It is a printed four-column paper on news print. Raymond Patterson, the county superintendent, is the editor and the

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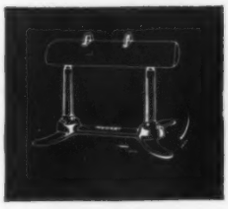

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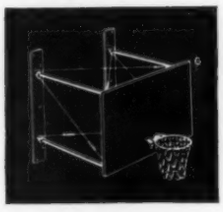

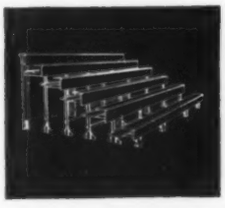

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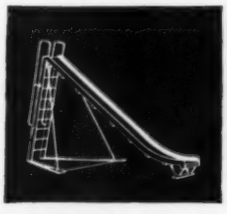

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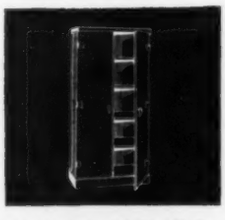

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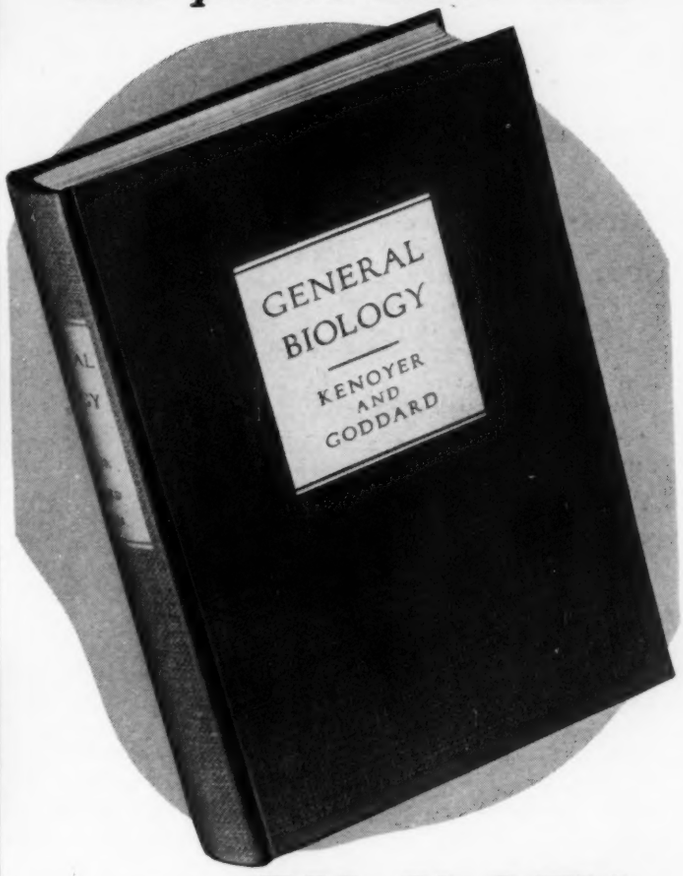

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Silver Anniversary

Reed College at Portland, Ore., has recently issued a most attractive brochure commemorating the first quarter century of its existence. It gives the history and progress of the institution and announces the gaps in its program that might be filled through gifts by individuals interested in college education.

BUILDINGS

Safe for School Use

The gas distributed by all public utilities of California is dry and odorized and is delivered under standard conditions of quality and pressure so that it is safe for school use. This is the conclusion reached following a survey by railroad commission of the state into the use of gas in California schools. From the survey it was concluded that conditions existing at New London, Tex., were entirely different from conditions existing in California, in that the Texas school was utilizing an unodorized gas at widely varying and excessive pressures.

Janitor Extraordinary

The janitor at the junior high school of Dunedin, Fla., was the commencement speaker for the ninth grade of that school recently. Being a former actor and stage director, the janitor, Albert Lando, was a favorite of the graduates and his address drew a big hand.

All-Year Regulation

An all-year air-conditioning plant will be a feature of a $165,000 remodeling project at Culver Military Academy, Culver, Ind., which will provide enlarged and rehabilitated living quarters for cadets. Latest types of scientific lighting fixtures, which have been approved by the lighting institute, will be in all cadet rooms. A fireproof basement vault will be constructed for personnel records, and a large picture window and broad open terrace will overlook Lake Maxinkuckee.

Parish Project

Construction begun in late May of a new brick combination auditorium-gymnasium and development of a nine-acre athletic field and community playground for the White Castle High School launched a unique Louisiana building program.

The program is nothing less than a parishwide school building and reconditioning project, for which local contributions alone total $240,000, affecting twenty-five white and Negro schools. It will mean that every child, white and Negro, living in Iberville Parish will be able to attend school in a modern building, properly equipped, and placed on an area of ground that is adequate in size, according to L. P. Terrebonne, superintendent of schools in Iberville Parish.

Home Run Liability

A small playground, near-by auto parking and the consequent damages brought about the organization of a window-breaking insurance company set up by pupils of a Wisconsin school.

Pupils studying insurance conceived the idea of starting an insurance company to protect children against liability in case of property damage. The president of the company is twelve years old, and members of the board of directors are eleven and twelve. Policies sell for ten cents and give the holder full protection against window breakage from any kind of ball thrown in the playgrounds between the hours of 8 a.m. and 5 p.m., Sunday and holidays excepted.

If the window is broken through carelessness of the one insured, the company pays only half the bill. Protection is offered only to those who hold fully paid policies at the time the harm is done and only for one breakage. After that the policyholder must take out a new policy.

"Gee, some of the kids are tough to sell to — until they break a window," commented the secretary of the company.

NAMES IN NEWS

Awards and Honors

DR. STANLEY H. HOLMES, retiring from the superintendency of schools after thirty-one years of service, was thanked recently for what he has done for local education in New Britain, Conn., by a citywide demonstration in his honor.

DR. JAMES HARDY DILLARD has been awarded the Theodore Roosevelt Medal of the Roosevelt Memorial Association in recognition of sixty years of "wise and devoted work in behalf of the American Negro and the creation of a better understanding between the white race and the black." Doctor Dillard's work led to the establishment of the Jeanes Fund and the Southern University Race Commission.

DR. JOHN H. FINLEY, editor-in-chief of the *New York Times*, was the third recipient of the medal of the New York Academy of Public Education for distinguished service to public education.

CHARLES L. BIEDENBACH, founder of the Berkeley Teachers' Association, Berkeley, Calif., was honored recently at a tea given by the association upon the occasion of his retirement as principal of the high school.

LAWRENCE W. MAYBERRY, for twenty-five years superintendent of public schools at Wichita, Kan., was honored recently in his home city by a three-day celebration. Seven hundred and fifty Wichita teachers presented a series of events honoring Mr. Mayberry, and calling to the attention of the community the growth and efficiency of the public schools since he assumed office in 1912.

H. L. FRICK, acting principal of the University High School, Columbia, S. C., has been awarded a fellowship of $2,000 by the General Education Board of New York providing for a year's graduate study at Ohio State University.

Among the Superintendents

SUPT. REX PUTNAM of the city schools of Albany, Ore., has been appointed by Gov. Charles H. Martin to the position of state superintendent of public instruction to fill the unexpired term of DR. C. A. HOWARD, who has resigned to accept the presidency of the Eastern Oregon Normal School at La Grande, Ore.

JAMES L. HANLEY, assistant superintendent, will succeed DR. ALEXANDER J. STODDARD, who resigned as superintendent of schools at Providence, R. I., to head the school system at Denver.

O. E. PORE, formerly superintendent of schools at Newark, Ohio, has been appointed supervisor of elementary schools in the Ohio Department of Education.

H. E. WILSON, superintendent of schools for the last six years at Byron, Okla., was named superintendent of city schools at Beaver City, Okla., to succeed R. P. EVANS.

GEORGE WHITE, superintendent of the school system at Hobbs, N. M., has resigned his position to become associate professor in the school of education at the University of New Mexico.

CARLYLE C. RING, superintendent of schools at Little Falls, N. Y., will succeed DR. STANLEY H. HOLMES, who is retiring as superintendent of schools in New Britain, Conn.

HENRY G. CLEMENT, for nineteen years superintendent of the public schools at Redlands, Calif., has submitted his resignation from the position effective September 1, because of ill health.

SUPT. IRA R. MORRISON of Endicott, Wash., has been elected head of the school system of Newport, Wash., for the ensuing year. He will succeed T. C. WALLER, who is to be school administrator at Davenport, Wash.

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In advancing the growing trend of educators to relate all possible school subjects to the work of the art department, the Binney & Smith Company is eager to cooperate to the fullest extent.

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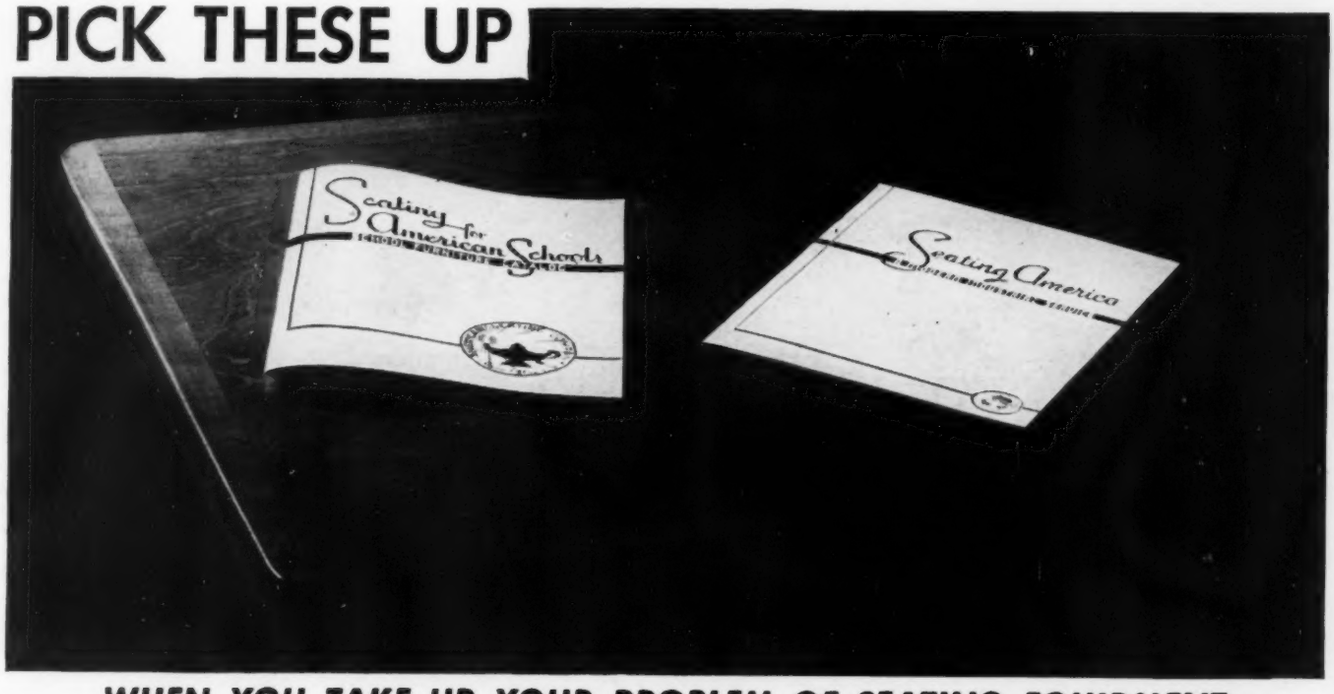

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JOHN SHAW of Spokane, Wash., will be high school principal, W. B. SMITH of Twin Falls, Ida., school superintendent, and WELLINGTON PEGG, assistant superintendent of the city system of Wenatchee, Wash., for the coming year.

CHARLES THOMAS SAMUELS has been elected superintendent of schools at East Whittier, Calif., to succeed the late ALFRED JONES. Mr. Samuels has been superintendent of the Lowell school district for the last six years.

IRVING P. MURPHY is the new superintendent of schools at Hot Springs, N. M. He was formerly superintendent of one of New Mexico's largest consolidated schools systems at Greville.

HERMAN BROWE, for several years director of elementary education in the Detroit public schools, has been appointed assistant superintendent in charge of elementary education.

HOMER C. WILSON, principal of Washington Junior High School, Fresno, Calif., was elected city superintendent of schools succeeding O. S. HUBBARD, who submitted his resignation. EDWIN C. KRATT, principal of Fresno High School, was named assistant superintendent succeeding W. B. MUNSON.

T. M. JONES, of Omaha, Tex., who accepted the appointment as superintendent of schools at New London, Tex., just prior to the closing of the schools, has resigned. Mr. Jones gave no reason for his action other than that he wanted to be relieved of the responsibility of a position in the community which suffered so disastrously from the school building explosion in March. The resignation was accepted.

SAMUEL BROOKS HOLLOMAN of Huntsville, Tex., has been elected superintendent of schools at Stockdale, Tex.

ZACHA VANDEGRAFT, for seven years superintendent of schools at Inman, Kan., has been appointed superintendent of schools at Madison, Kan.

County Superintendents

BLAKE T. NEWTON, division superintendent of schools of Westmoreland and Richmond Counties, Virginia, was recently appointed by Governor Peery to membership on the state board of education to succeed DAVE E. SATTERFIELD, JR., who resigned. This appointment nearly balances the composition of the state board between professional educators and laymen.

HUGH CASON of Jewell, Ga., has been elected superintendent of Warren County schools, Georgia.

MILO F. WINCHESTER, teacher of vocational agriculture and industrial arts at Highland Central High School, was selected to succeed the late WILLIAM R. TREMPER of Rhinebeck, as school superintendent of the fourth supervisory district of Dutchess County, New York.

DR. EDWIN W. BROOME has been reelected superintendent of schools of Montgomery County, Maryland, for a four-year term beginning August 1.

WILLIAM TURNER BODENHAMER of Decatur, Ga., has been elected superintendent of Tift County schools, Georgia, to succeed the late CHARLES GOODMAN HARMAN.

J. B. SMITH, Grand Junction, Tenn., has been elected superintendent of education of Hardeman County, Tennessee, succeeding W. W. CLIFFT, ousted several weeks ago in a chancery ruling culminating a suit brought by citizens. The suit charged that the superintendent of education and members of the board had exceeded the school's budget.

Principals

DR. BEN R. CRANDALL, principal of the Wasco High School, Wasco, Calif., has relinquished his executive post to LESTER R. SMITH, assistant principal, and at his own request will become social science instructor in the school and student counselor.

EVAN H. THOMAS has been appointed supervising principal of the Blairstown public schools, Blairstown, N. J. Mr. Thomas was formerly a member of the faculty at Somerville High School, Somerville, N. J.

LEON O. FISHER has been appointed supervising principal of schools of Livingston, N. J. Mr. Fisher was formerly principal of Findern School at Livingston.

RALPH HALL, principal of the Lincoln School, Ardmore, Okla., has been named principal of the junior high school of that city for the coming year.

R. E. FILDES, principal of Hay-Edwards School, Springfield, Ill., has been named city superintendent of schools.

CHESTER L. PERSING, director of studies at New Trier High School, Winnetka, Ill., has been named principal of Western Military Academy at Alton, Ill.

E. G. BROCKMAN, principal of schools at Mount Ayr, Iowa, for seven years, was elected principal of the high school at Indianola, Iowa, recently.

WILLIAM T. MCCOY, summarily deposed March 9 from his post as principal of Bowen High School, Chicago, filed petition June 2 in superior court for a writ of mandamus to compel the board of education to restore him to that position.

JOHN D. RICHMOND, teacher in the high school at Tazewell, Va., since 1931, was elected principal of the school recently to succeed EDWARD F. BIRCKHEAD, who resigned to become superintendent of the city school system at Danville, Ky.

L. R. RASMUSSEN, for five years principal of Golden Gate Academy, Berkeley, Calif., will become principal of Lodi Academy, Lodi, Calif. He will be succeeded by RALPH B. PROUT, for the last three years principal of Mountain View Academy, Mountain View, Calif.

L. G. WALKER of Rockford, Ala., has been named to succeed B. E. DISMUKES as principal of Perry County High School, Marion, Ala. Mr. Walker was for five years principal of city schools at Jackson, Ala., and for six years has been principal of Coosa County High School.

W. ALAN JOHNSON, principal of West Side High School, Newark, N. J., was appointed assistant of secondary education and of Barringer Evening High School, Newark.

RICHARD J. WERNER of Oakland, Calif., is the new principal of Salinas Junior College, Salinas, Calif. He succeeds JOHN B. LEMONS, who was transferred to head of the physics and geology departments.

L. W. BROOKS, principal of the North High School, Wichita, Kan., since 1931 and previously supervisor of secondary education, was named principal of Wichita High School East by the board of education. He succeeds TRUMAN G. REED, who has accepted the principalship of Lewis and Clark High School in Spokane, Wash. GROVER C. DOTZOUR, vice principal at North, has been promoted to the post of principal.

DR. JOHN FENTON FOX, supervising principal of the Bridgewater Township schools, New Jersey, has resigned to become assistant supervising principal of the Hamilton Township schools, Mercer County, New Jersey. He will assume his new duties in September.

ROBERT R. BLUNT, supervising principal of schools, Cedar Grove, N. J., has been appointed to succeed WARREN W. HALSEY as supervising principal of public schools at Garwood, N. J.

ROY E. KYLE of Galax, Va., has been appointed principal of William King High School, Abingdon, Va., to succeed F. O. WYGAL, who will go to the Galax High School.

ARTHUR D. JONES, principal of the high school at Grangeville, Ida., has been elected principal of the high school at Toppenish, Wash., to fill the position vacated by JACK WOOD, who resigned to become superintendent of schools at Oak Harbor, Wash.

E. N. DONNARD, principal of the Pampa High School, Pampa, Tex., was elected principal of the high school at Marshall, Tex., recently.

CRAWFORD S. MCGIVAREN, principal of Carr Central High School, Vicksburg, Miss., for eight years, has resigned to accept the principalship of the high school at Clarksdale, Miss. He will succeed R. C. COOK, who will become director of the University High School and

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teacher training at the University of Mississippi. Mr. Cook will succeed A. B. WEBB, who is joining the staff of the Mississippi Book Supply Company.

R. S. BROCKMAN, formerly of Flat River, Mo., will succeed ELMER A. JENSON as principal of the senior high school at Quincy, Ill. Mr. Jenson resigned to complete graduate work.

THOMAS D. OZMONT, former principal of the high school, has been elected superintendent of schools at Union City, Tenn.

ESTELLE MARION BONNELL, dean of the Child Education Foundation, New York City, will become headmistress in August of the Ruth Coit School, formerly the St. Mary's Hall, San Antonio, Tex.

R. C. FORD, principal of the high school, St. Charles, Mo., during the last nine years, has tendered his resignation to accept the position as dean of the Wentworth Military Academy and Junior College at Lexington, Mo.

In the Colleges

DEAN HERMAN B. WELLS of the school of business administration, Indiana University, has been named acting president succeeding PRESIDENT EMERITUS WILLIAM LOWE BRYAN, who resigned.

J. W. CALHOUN, professor of applied mathematics and comptroller, has been named acting president of the University of Texas. He succeeds the late DR. H. Y. BENEDICT, who died suddenly on May 10.

Dr. Clarence V. Boyer, president of the University of Oregon, has submitted a surprise resignation to the state board of education. Doctor Boyer was inducted into the presidency a year ago last February. He declined to make a statement explaining his action until the board had met.

PROF. WILLIAM HEARD KILPATRICK, who retires at the end of the summer session from his professorship of education at Teachers College, Columbia University, on account of the age limit, will lecture at Northwestern University during the autumn term. He is also expected to lecture at Stanford University during the summer session of 1938. In both courses his subject will be "The Philosophy of Education."

DR. GEORGE F. ARPS, dean of the college of education at Ohio State University, recently became dean of the graduate school, succeeding DEAN EMERITUS WILLIAM MCPHERSON. DR. ARTHUR J. KLEIN, professor of education at Ohio State since 1930, was named Doctor Arps' successor as head of the college of education.

DR. HOWARD R. ANDERSON, present assistant professor of history and chairman of the social studies department of the University High School, University of Iowa, has been appointed assistant professor of education at Cornell University. He will be employed jointly by the Ithaca board of education and the university.

DR. WILLIAM PRATT GRAHAM recently was elected chancellor of Syracuse University succeeding CHANCELLOR CHARLES WESLEY FLINT, who is now a bishop of the Methodist Episcopal Church in Atlanta. Doctor Graham had been acting chancellor since last year and has been associated with Syracuse University for forty-three years as student, professor of electrical engineering, dean of the college of applied science and acting dean of liberal arts.

DR. PAUL KAPPER, dean of the school of education at the College of the City of New York, has been appointed by the board of higher education president of the new Queens City College, which is expected to open in the autumn.

DR. JOHN W. HALL, dean of education at the University of Nevada, recently retired and was named emeritus dean and professor of education by the board of regents of the university. DR. FRED W. TRANER, professor of education, connected with the university since 1915, was elected to succeed Doctor Hall.

DR. ALFRED ATKINSON, since 1919 president of Montana State College at Bozeman, has accepted the presidency of the University of Arizona at Tucson. He succeeds DR. HOMER L. SHANTZ, who resigned last year to become chief of the division of wild life management of the forest service, U. S. Department of Agriculture.

DEAN S. C. GARRISON, head of the graduate school, George Peabody College, for the last four years, became acting president of the college on May 6. DR. CHARLES E. LITTLE, who had been acting president since the death on April 21 of PRESIDENT BRUCE R. PAYNE, became honorary acting president. A committee has been appointed by the board of trustees to nominate a president.

EMMA LOU HUMBLE, associate professor of education and supervisor of primary grades in the laboratory school of Emporia Teachers College, Emporia, Kan., is attending the University of London this summer.

Retirements

SUPT. C. W. CRUIKSHANK, who began his work in his present position at Mount Pleasant, Iowa, in 1908, and before that time was superintendent of schools at Fort Madison, Iowa, will retire at the close of the present school year from educational work. Altogether he has served in Iowa educational work for fifty-one years.

DR. E. W. BOHANNON, president of the Duluth State Teachers' College since 1901, will retire January 1 as a result of the new compulsory retirement plan of the state teachers' college board.

DR. CHARLES E. RUGH, professor of education at the University of California and associate director of practice teaching at the University High School, will retire at the close of the academic year.

EDWARD G. BOWERS, supervisor of primary grades at Massillon, Ohio, will retire at the close of the present school year after fifty-two years of service in the schools of Stark County.

GILBERT A. MORRIS of Roosevelt High School, Florence Waymire of Webster School, and Bessie A. Weaver of Whittier School, principals at Dayton, Ohio, will be retired this year because of the sixty-five-year age limit rule of the board of education. Ten teachers also are subject to the ruling.

FRANK O. HARTMAN, supervising principal of Mount Penn borough schools, Reading, Pa., retired with commencement activities of the Mount Penn High School, closing a teaching career of forty-four years. He will be succeeded by ROSCOE H. WARD, for the last four years supervising principal at Houtzdale, Pa.

H. T. MAIN, superintendent of Delaware County schools, Ohio, for eleven years, and identified with the city and county schools for fifty-one years, will retire August 1.

EUGENIE MARIE SUYDAM is retiring from the public school system of New Orleans after forty-eight years of teaching, thirty-nine of them as principal of the John McDonough High School. JOSEPHINE THOMAS, principal of the Frank T. Howard School, has been appointed her successor.

Deaths

JAMES G. TONTZ, vice principal of Benson Polytechnic High School, Portland, Ore., was killed instantly in an automobile accident near Vancouver, Wash.

WILLIAM F. SIMMONS, principal of the Walker Junior High School, Milwaukee, was found dead recently in his automobile in the garage at the rear of his home. Circumstances indicated death was caused by heart attack.

JOSIE B. SOARES, teacher in the New Orleans public schools for the last thirty-five years and principal of the Margaret C. Hanson Normal School for more than a year, died recently after a long illness.

E. L. PORTER, superintendent of schools at Buford, Ohio, died from a heart attack recently as he stepped from his automobile and approached the school entrance.

DR. JAMES LAWSON PATTERSON, for twenty-five years headmaster of Chestnut Hill Academy, Philadelphia, died at Burlington, N. J., at the age of 87.

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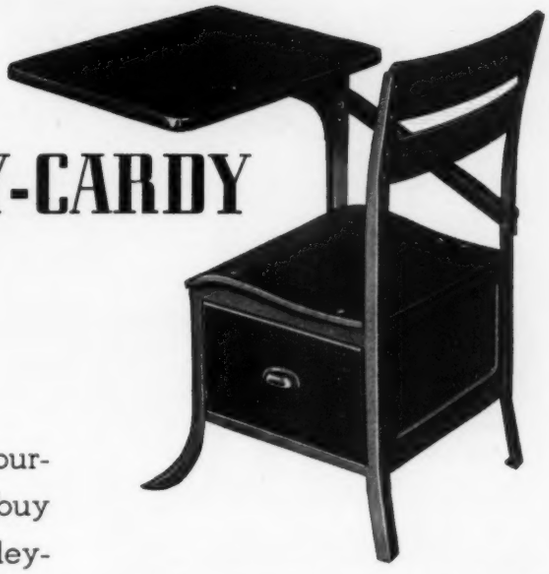

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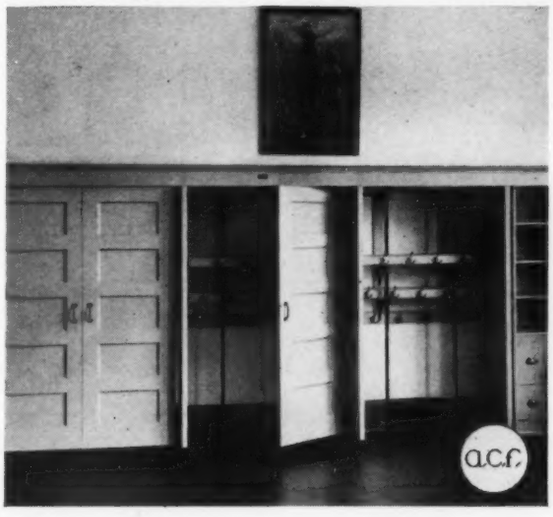

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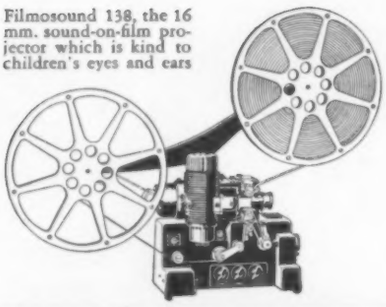

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VISUAL EDUCATION

Nonprofit Film Productions

A nonprofit film organization has just been launched in Los Angeles to produce a large number of educational films each year. The organization, known as the National Educational Film Foundation, Inc., has endorsement of the P.-T.A. and other civic bodies. Public schools will be able to obtain prints of the films of the foundation from the nearest state university or other organizations interested in the cause of visual education.

Discussion Tests

A fifteen-minute discussion by each homeroom teacher follows visual education programs at the Junior High School of Stafford, Kan., as a means of checking how much good is coming from this type of instruction. The results have been more than pleasing up to the present time, according to Principal C. G. Hubbart.

The program consists of a series of assembly programs, usually consisting of a three-reel film or equivalent, presented twice each month to intermediate and junior high school pupils. Attempt is made to show a picture in keeping with the "special day" being observed.

A program also has been arranged of interest to pupils of primary age. Primary teachers also use slides in teaching reading, word work and the social studies.

July Releases

Geographically the July film releases of the Bell and Howell Filmosound Library range from Burma to Old Mexico to Grand Canyon National Park. The list includes "Song of China," seven reels, produced in China entirely by Chinese; "Smiling Burma," two reels, a Huntington-White travel tale; Grand Canyon National Park, one reel; "Found in a Book," instruction in the use of library facilities in two reels, sponsored by the American Library Association; "Mexico by Motor," one reel, and another one-reel Mexican film, "Old Mexico."

Dramatizes Library Use

Now a motion picture has been made to train pupils in the better use of books. A two-reel silent motion picture entitled "Found in a Book" has been circulated by the American Library Association. Originally produced as a project at the library school of the University of Illinois, the film dramatizes commonly accepted library tools, such as the encyclopedia, card indexes, readers' guides. A simple story unites sequences.

Films for the School Screen

Biology: I—Microscopic Life

Eyes of Science—Background and arrangement of lenses which have given scientists the super-eye of the microscope. 45 minutes. 16 mm., silent. Transportation charges only. Junior and senior high schools. Bausch and Lomb Optical Company, 635 St. Paul St., Rochester, N. Y.

Myxomycetes or Slime Molds—Borderline organisms which are sometimes plants and sometimes animals; native haunts of the slime molds and several types of fruiting bodies. 2 reels. 16 and 35 mm., silent, available in safety film. For rent. International Educational Pictures, Inc., 40 Mount Vernon St., Boston, Mass.

Tiny Water Animals—Presenting microscopic organisms found in fresh water ponds and their characteristics and activities. 1 reel. 16 mm., sound. For rent. Ideal Pictures Corporation, 28 East Eighth Street, Chicago.

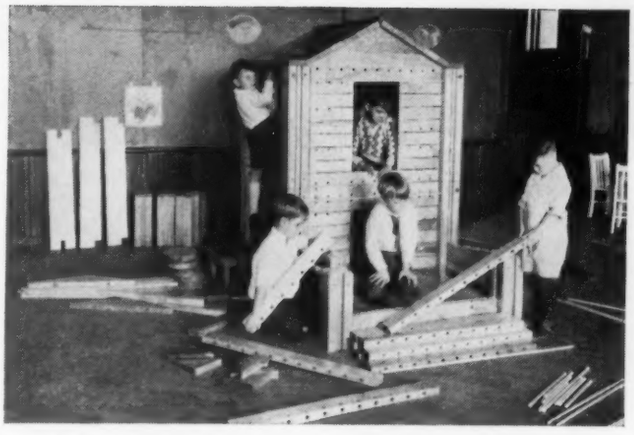
Mighty Atoms—The story of nature's scavengers and the action of these microscopic insects on cheese, plants, bulbs and insects. 1 reel. 16 mm., sound. For rent. Walter O. Gutlohn, Inc., 35 West Forty-Fifth Street, New York City.

Armies of Health and Disease—Nature and appearance of bacteria, pasteurization, bacteria as a cause of disease and preparation of vaccines and serums. 12 minutes. 16 and 35 mm., silent, noninflammable. For rent and purchase. Herman A. DeVry, Inc., 1111 Center Street, Chicago.

Marvels of the Microscope—Depicting some of the many uses to which the microscope has been put by scientists. 1 reel. 16 mm., sound. For rent or purchase. Walter O. Gutlohn, Inc., 35 West Forty-Fifth Street, New York.

Ameba—Revelations as to the structure and life functions of this simple one-celled microscopic organism. 1 reel. 16 mm., silent. For rent or purchase. Edited Pictures System, Inc., 330 West Forty-Second Street, New York City.

Getting Acquainted With Bacteria—Introduces the child to the field of microscopic organisms and shows that most bacteria are as harmless as buttercups and daisies. 1 reel. 16 and 35 mm., silent, noninflammable. For rent or purchase. Society for Visual Education, Inc., 327 South LaSalle Street, Chicago.



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THIS NEW AMERICA. *The Spirit of the Civilian Conservation Corps. By Alfred C. Oliver, Jr., and Harold M. Dudley. New York: Longmans, Green and Company,* 1937. *Pp.* xix + 188. $1.25.

An enthusiastic, human point of view of an emergency experiment by the federal government in a specialized field of education. Intensely interesting but lacking in completeness and essential detachment in presentation. Good current material.

SOMETHING OF MYSELF. *For My Friends Known and Unknown. By Rudyard Kipling. Garden City: Doubleday, Doran & Company, Inc.,* 1937. *Pp.* 252. $2.50.

Much of worth while reminiscence but less of himself than the title would indicate, Kipling's autobiography is still something that no one who has really been held by the flavor of his work can do without.

THE FASCIST: HIS STATE AND HIS MIND. *By E. B. Ashton. New York: William Morrow & Co., Inc.,* 1937. *Pp.* xv + 320. $2.50.

For those who would study with interest the apparently new phenomenon of Fascism, this is the most accurate rendering and the clearest presentation yet made. The philosophy and ideology of Fascism are clearly shown against what, at times, appears to be the paradox of practice.

THE NATURE OF A LIBERAL COLLEGE. *By Henry M. Wriston. Appleton, Wis.: Lawrence College Press,* 1937. *Pp.* xi + 177. $1.75.

Lawrence's president presents a series of essays in which he gives his opinion of the nature and function of the liberal arts college. Filled with good philosophy and much excellent material on this moot phase of higher education.

CHANGING MAN. *The Education System of the USSR. By Beatrice King. New York: The Viking Press,* 1937. *Pp.* 319. $2.75.

Complete and enthusiastic account of education in Soviet Russia. However, the author's obvious sympathy does not detract much from her objective and normal critical attitude to all phases of Russian practice. Decidedly worth reading.

ROMAN BRITAIN AND THE ENGLISH SETTLEMENTS. *By R. G. Collingwood and J. N. L. Myres. The Oxford History of England. New York: Oxford University Press,* 1936. *Pp.* xxvi + 515. $5.

Most complete picture of pre-Roman and Roman Britain; especially interesting survey of social and economic life during Roman occupation. Even the Arthurian legend is reinterpreted in analysis of the fifth century. Appeal: reference in upper secondary and university courses.

THE CROQUET PLAYER. *By H. G. Wells. New York: The Viking Press,* 1937. *Pp.* 98. $1.25.

Endemic fear! A fable — or short story — that lingers provocatively as have other Wellsian fantasies.

THE RECOVERY PROBLEM IN THE UNITED STATES. *A Symposium. Washington, D. C.: The Brookings Institution,* 1936. *Pp.* xiv + 709. $4.

"The economic situation today is one of delicate adjustment and precarious balance." A sane and balanced diagnosis of current conditions based on multiple analysis of underlying conditions. Highly recommended for professional reading.

SECONDARY SCHOOL TEACHING. *By J. G. Umstattd. Boston: Ginn and Company,* 1937. *Pp.* x + 459. $3.

Another teacher in secondary education gives the benefits of his own course to the educational world through this textbook. Interesting and easy to read.

A HANDBOOK OF PRIVATE SCHOOLS FOR AMERICAN BOYS AND GIRLS. *An Annual Survey. By Porter Sargent. (21st Edition). Boston: Porter Sargent,* 1937. *Pp.* 1182. $6.

Much more than a complete directory of private schools, which is a valuable reference for every high school library, the twenty-first edition is also unusually stimulating for the pungency and outspoken comments of the author on current problems and views in education. He castigates the private school both for dry rot and parasitism. Most refreshing.

FLAGS OF AMERICA. *By Col. William H. Waldron. Huntington, W. Va.: Standard Printing and Publishing Company,* 1935. *Pp.* 71. $1. (*Also in pamphlet form at* $0.50.)

Forty-eight flags of the United States in color; also a brief illustrated manual on flag use. For all school libraries as specialized reference.

THE DEVELOPMENT OF A MODERN PROGRAM IN ENGLISH. *Ninth Yearbook of the Department of Supervisors and Directors of Instruction, N. E. A.,* 1936. *Washington: National Education Association,* 1936. *Pp.* xi + 193. $2.

A yearbook on certain of the major problems involved in the organization of English in our schools from the standpoint of the supervisor.

A HISTORY OF AMERICAN POLITICAL THOUGHT. *From the Civil War to the World War. By Edward R. Lewis. New York: The Macmillan Company,* 1937. *Pp.* x + 561. $5.

Study of our political thinking since the adoption of the thirteenth, fourteenth and fifteenth amendments. Particularly significant as a background of understanding for current political problems. Recommended professional reading and for upper secondary and college libraries.

Just Off the Press

WAR MADNESS. *By Stephen and Joan Raushenbush. Washington, D. C.: National Home Library Foundation,* 1937. *Pp.* 190. $0.25.

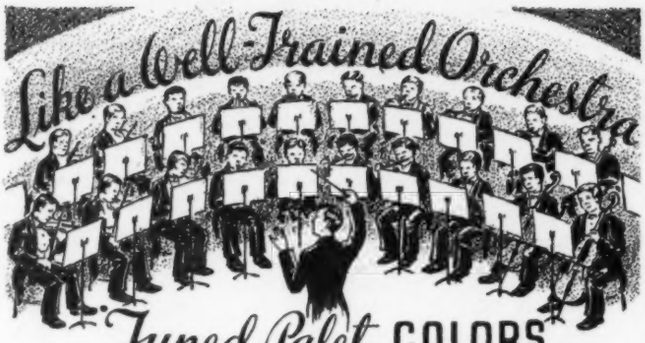
TEACHING HIGH-SCHOOL STUDENTS TO READ. *A Study of Retardation in Reading. By Stella S. Center and Gladys L. Persons. A Publication of the National Council of Teachers of English. New York: D. Appleton-Century Company, Inc.,* 1937. *Pp.* xviii+167. $2.25.

NATIONAL HEALTH SERIES: CANCER. *By Francis Carter Wood, M.D. (Revised Edition).* *Pp.* 102; DIABETES. *By James Ralph Scott, M.D. Pp.* 132; FOOD FOR HEALTH'S SAKE. *By Lucy H. Gillett. Pp.* 74; HEAR BETTER. *By Hugh Grant Rowell, M.D. Pp.* 83; LOVE AND MARRIAGE. *By Thomas Walton Galloway. Pp.* 102; TUBERCULOSIS. *By H. E. Kleinschmidt, M.D. Pp.* 77; WHY THE TEETH. *By Leroy M. S. Miner, M.D. Pp.* 71; YOUR MIND AND YOU. *By George K. Pratt, M.D. Pp.* 126; STAYING YOUNG BEYOND YOUR YEARS. *By Howard W. Haggard, M.D. Pp.* 89; THE HUMAN BODY. *By Thurman B. Rice, M.D. Pp.* 88. *All Edited by the National Health Council. New York: Funk & Wagnalls Company,* 1937. $0.35, *or three for* $1.00.

CO-CURRICULAR ACTIVITIES IN ELEMENTARY SCHOOLS. *By Henry J. Otto and Shirley A. Hamrin. New York: D. Appleton-Century Company, Inc.,* 1937. *Pp.* xiv+441. $2.75.

A WORKBOOK IN HEALTH FOR HIGH SCHOOL GIRLS. *By Gladys B. Gogle. New York: A. S. Barnes and Company, Inc.,* 1937. *Pp.* xvi+267. $1. (*Paper Cover*).

AUDIO-VISUAL AIDS FOR TEACHERS. *By Mary E. Townsend and Alice G. Stewart. Social Science Service Series: II. New York: The H. W. Wilson Company,* 1937. *Pp.* 131. $0.75. (*Paper Cover*).

EDUCATION FOR DEMOCRACY. *Proceedings of the Ninteenth American Country Life Conference, Kalamazoo, Mich., Aug.* 10-13, 1936. *Chicago: The University of Chicago Press,* 1937. *Pp.* 153. $1.50.

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1. *"PRANG" CRAYONEX—A 3-way crayon for use on paper, wood or fabric. High quality color pigment gives vivid, crystal-clear colors. A special combination of five waxes . . . strong, non-brittle, less breakage. Colors blend and mix easily without peeling, flaking or sliding. Complete color range in color selector box.

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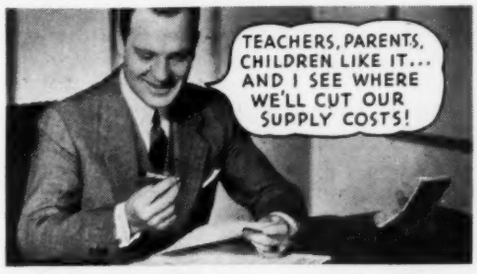
MAKERS OF SCHOOL SUPPLIES FOR OVER 100 YEARS

School Boards TURN-TO FAMOUS AUTOPOINT PENCIL...

For Safety . . . Sanitation . . . CASH SAVINGS



SCHOOL boards, superintendents, principals, teachers are advocating AUTOPOINT mechanical pencil installations as soon as they see the new AUTOPOINT school-pencil plan. Schools everywhere get better writing from pupils, thanks to AUTOPOINT S exclusive "Grip-Tip" that keeps leads from wobbling—sliding—twisting, makes writing less tiring and *can't* get out of order. They get *safety* from pencils that are always ready to write—yet never needle-sharp. They get *sanitation!*—germ-proof, sterilizable construction—made of Bakelite—prevents transmission of germs.

Greatest of all, they get *cash savings* . . . AUTOPOINT installations, with tested AUTOPOINT control system, soon pay for themselves by eliminating wood-pencil waste and loss! Write now for complete details of plan and samples. Adapted to school use. No obligation!

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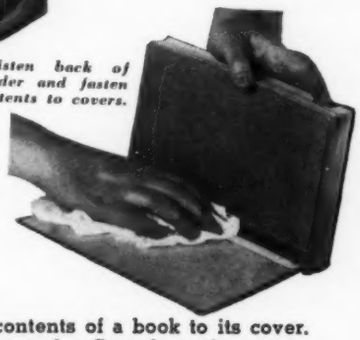
The Better Pencil

REPAIR YOUR WORN BOOKS

this *Quick* way

Moisten binder and fit over book as shown.

Moisten back of binder and fasten contents to covers.



Gaylord's Double Stitched Binder securely refastens the contents of a book to its cover. Takes only a few minutes to do. Costs but a few cents. Books repaired by this method are as strong as when new.

This Double Stitched Binder is made of a special strong cloth sewed together with a unique machine stitch which will not ravel. Write for prices and a free copy of "Bookcraft" which explains every step in book repair.

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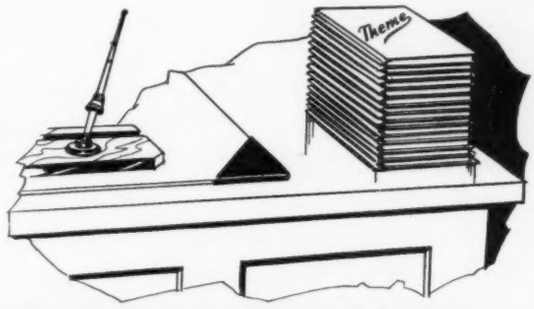
Makers of Better Library Supplies and Furniture



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Equipped with the exclusive BUILT-IN Duo-Tang fastener—an outstanding feature found in no other article of its kind. Will not twist or turn.

Duo-Tang Loose Leaf covers enable students to present their papers in an orderly and systematic manner. Teachers require less space to stack covers on their desk. Can check or grade notes with ease and speed. Both students and teachers prefer Duo-Tang covers because they are easy to operate and handle—practical, economical. Important notes can be preserved for future reference at low cost.

Duo-Tang covers are durably built of wear-resisting paper with embossed leather grain finish. Available in ten pleasing colors—note or letter size. Send for sample today.

Ellingsworth Manufacturing Co.

200 SOUTH PEORIA STREET, CHICAGO, ILLINOIS

NOTES FOR BUYERS • • •

Sitting Pretty

Remember the warm, wiggly afternoons of your own school days and how you squirmed, like an angleworm, on the hard seats.

The backs were almost upright and the seats flat. If you happened to be a little smaller than the average, you occasionally slid off on the floor during a squirming spasm. How disgusted the teacher looked and how the other pupils laughed!

Barely a dozen years ago making of seats of any kind was mostly a matter of cut-and-try guesswork and of decorative art that was based upon tradition.

To provide permanent guiding principals in public seating, the American Seating Company of Grand Rapids, Mich., conducts studies. The latest data on anatomy, orthopedics, school hygiene and methods of administration, are sifted for relevant facts and theories. Thousands of school children are measured in every pertinent dimension by an elaborate technique and equipment.

Out of these studies a new science of sitting and seating has evolved and is being applied to this company's products despite the cost of changing dies, patterns and machines. The results are accepted by the highest educational and medical authorities, including the American Medical Association through its council on physical therapy.

Mädchen in Uniform

Gone are the days when sweet young things appeared in pastel organdies and the accompanying male chorus sweltered in blue serge and white flannels when the high school presented its musical festival.

Many high schools are adopting regular choral gowns merely to improve the appearance of the group it is presenting before the public eye. Besides uniformity, the choral dress lends a democratic influence in dampening the young ardor for "keeping up with the Joneses" in public school presentations.

The Paul A. Willsie Company, Omaha, Neb., reports that it is finding a market for choral robes in public schools and has published an illustrated folder describing various types. This company does not carry choir gowns in stock, all being hand tailored on receipt of order. Deliveries can be made within a week.

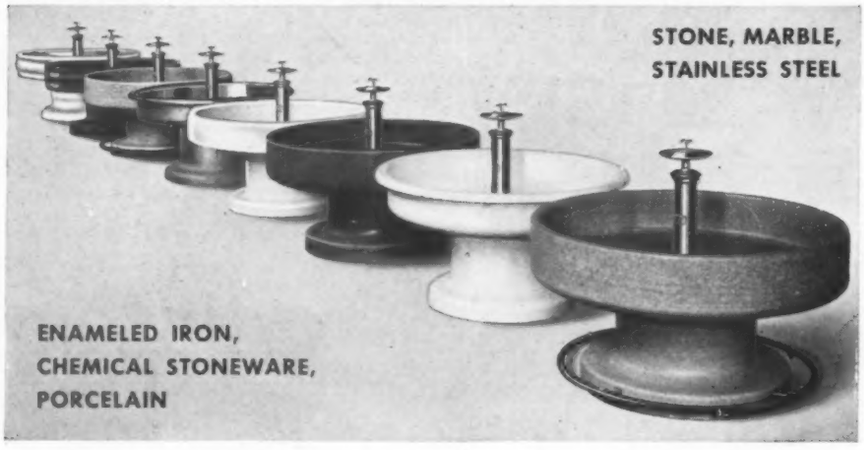
Duty Doubled

The teacher in a double duty frock (office-dinner dress) instructs pupils on double duty seats, while she wields at the blackboard a double duty eraser. That's how it goes in this smart merchandising era.

The Beckley-Cardy Company, 1632 Indiana Avenue, Chicago, has married a closely matted felt to a special sponge rubber and thus provided a combination chalk eraser and blackboard cleaner said to outwear ordinary felt erasers.

When this Premier eraser is moved back and forth over the blackboard each eraser felt erases and the center rubber squeegee picks up all the loose chalk dust. The rubber center or squeegee serves two purposes: (1) it ensures clean blackboards; (2) it gives longer life to the eraser. Furthermore, blackboards regularly cleaned with the Premier are said to require less attention and do not turn gray with age.

NOW A WIDE SELECTION



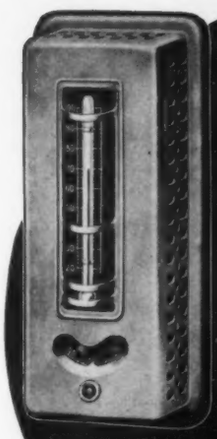
Modern Bradley Washfountains are now offered in a complete line as shown above. Some prefer marble—some, enameled iron—while others like the stainless steel models.

There is also a choice of foot-control or hand-control of water flow. Some are arranged for connections from below—others from above—there is a model to meet every plumbing code. Some prefer liquid or powdered soap dispensers (not illustrated)—some a soap tray, as shown, for bar soap.

In addition to these different materials and accessories, Bradley Washfountains are made in the full circle 54-inch diameter size for serving 10 persons, and in the 36-inch model for 6—and in semi-circular models for narrow washrooms. BRADLEY WASHFOUNTAIN CO., 2207 W. Michigan St., Milwaukee, Wis.

Modern washrooms are equipped with Bradley Washfountains.

BRADLEY
WASHFOUNTAINS



REDUCE heating costs 15 to 40 per cent

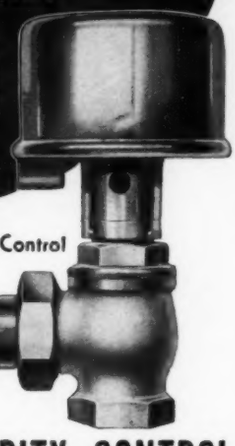
Stop complaints due to OVER and UNDER heating

Keep each room at the right temperature

Improve health and efficiency of people in heated rooms

Fuel savings alone often pay back the cost of Powers Control in 1 to 3 years

Phone or Write for Estimate of cost of POWERS Control for your heating system — THE POWERS REGULATOR CO., 2754 Greenview Avenue, Chicago.



Offices in 45 Cities—See Your Phone Directory
45 Years of Temperature and Humidity Control

POWERS

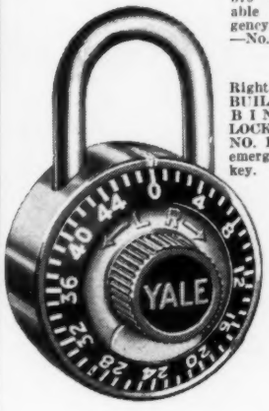
Automatic

TEMPERATURE and HUMIDITY CONTROL

SCHOOL EXECUTIVES — SPECIFY

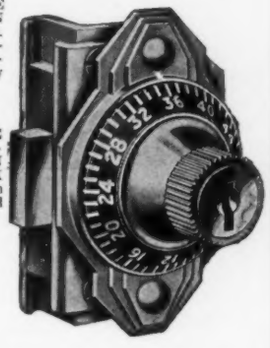
TRADE **YALE** MARK

LOCKER LOCKS



Left — YALE COMBINATION PADLOCK NO. 579 (also available with emergency control key —No. 589)

Right — YALE BUILT-IN COMBINATION LOCKER LOCK NO. L3374. With emergency control key.



YOUR school locker system can have the security, dependability and convenience of YALE Locks either for new installations or replacements. Besides YALE Combination Padlocks and Built-In Type Combination Locks, we also supply YALE Key Locks with Pin-Tumbler, Grooved Key or Flat Key operation. Specify YALE for maximum protection for your lockers.

Write to us for any information that will be helpful to you.

THE YALE & TOWNE MFG. CO.
STAMFORD, CONN., U. S. A.

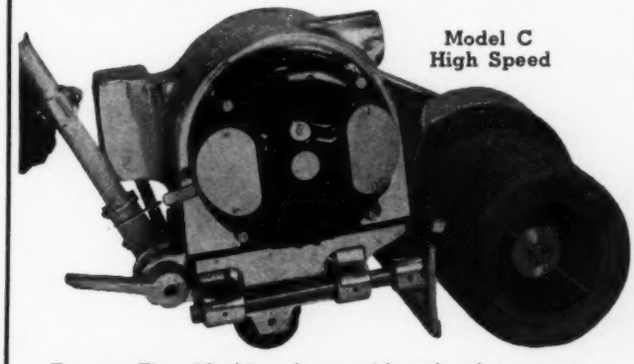
The Ideal Portable Chair

QUIET IN OPERATION—
COMFORTABLE IN USE—
ECONOMICAL IN COST!

CLARIN MFG. CO.
4640 WEST HARRISON ST., CHICAGO, ILL.

The Tennant Floor Maintenance System

Dustless Dry Cleaning -:- Dustless Sanding
Seals and Burnishes
Polishes -:- Waxes -:- Scrubs



Model C
High Speed

Tennant Floor Machine shown without hood or vacuum.

8 in. roll of steel wool for burnishing penetrating seal and dry cleaning.

8 in. or 16 in. steel wool cylinders, scrubbing or polishing brushes, can be used interchangeably on the same machine.

Send for list of users in your locality where you can see correctly maintained floors.

Write for information and demonstration

G. H. TENNANT COMPANY
MINNEAPOLIS, MINN. WESTFIELD, N. J.
ESTABLISHED 1870

. . BUT WASHING ROUTINE CAN BE MADE MORE PLEASANT

ONLY the confirmed optimist believes that the average student eagerly anticipates washing his or her hands and face frequently during school hours. And in fairness to the student, the washing facilities available in many of today's schools do little to encourage this all-important practice.

But there *is* a way to encourage hygienic washing habits among your students during their formative years. It's the Ivory Dispenser way.

Ivory Dispenser service goes far toward making personal cleansing more pleasant. The handsome dispenser itself is inviting. And the soap—pure, gentle, rich lathering Ivory Soap—completes the invitation.

For here is a fine toilet soap which is popular with both youngsters and adults. Here is a soap famous everywhere for its thorough, gentle cleansing action.

Ivory Soap Dispensers are low in first cost and in up-keep. You'll be agreeably surprised to learn how little it costs to install them in all your washrooms. A postcard or letter will bring you an informative folder on Ivory Dispenser service.

PROCTER & GAMBLE • Industrial Sales Department NS
Gwynne Bldg., Cincinnati, Ohio

The Ivory Dispenser delivers genuine Ivory Soap in fine, free-flowing *flakes* or *granules*. Each is a self-contained soap dispensing unit. Easy to install; easy to refill. Tamper-proof. Delivers a measured amount of Ivory Soap with each push of the plunger. No parts to rust, tarnish or corrode. Low in first cost and in up-keep.

IVORY SOAP DISPENSERS

Mother Goose

"Hickory, dickory, dock, the mouse ran up the clock."

The pupils yell with merriment as the irate custodian, broom in hand, takes after the mischievous Mickey who has been playing around again in the paper tape of the program clock.

Possibly more angry than Mr. MacGregor when he failed to catch Peter Rabbit, the breathless custodian comes panting back, thwarted again. Suddenly his face lights up, much to the dismay of the amused children.

"Eureka," he cries and dashes immediately toward the superintendent's office where he picks up the June issue of The NATION'S SCHOOLS and thumbs through the advertisers' index. "Page 91," he mutters. Ah, there it is, the picture and description of the new Holtzer-Cabot "Schedule Master," a program clock on which the hourly programs are distinctly marked, eliminating the old style paper tape.

Colorists

Brilliant Little Boy Blue, bright yellow Goldilocks, and flaming Red Riding Hood come tumbling out of the pages of Mother Goose into real life even when chubby fingers in the kindergarten recreate them in pure primary Solarite Art Colors.

Solarite colors, made by the Reardon Company, 2200 Second Street, St. Louis, are so formulated that they require only the addition of cold water to make them ready for immediate use. Many American public school systems have standardized on Solarite art colors as a medium in kindergarten art classes where the blending of bright colors, rather than detail or form, is stressed.

Poster artists, too, are not immune to the bright, rich primaries, together with nine specially formulated shades. The intermixing of the nine special colors and the primaries offers an almost unlimited range.

Meet the Commodore

Comes to our desk a welcome bulletin, "Recommendations for Classroom Lighting," from the F. W. Wakefield Brass Company of Vermillion, Ohio. A duplicate copy is available free of charge to any school official.

Lighting units used in each of the illustrations, showing even old type classrooms brought up to date by proper lighting and painting, are the Commodore luminaires.

This luminaire is an important new development in the open bowl type of lighting unit. The reflector is a radical departure from materials previously used, being plaskon, an organic compound developed after long trial.

LOOKING FORWARD

The Legislatures Act

LEGISLATION for public education formed a significant part of the work of the 1937 state legislatures. While the tabulation and analysis are not yet complete, there is sufficient evidence that distinct effort was made to secure better provision for the inadequacies in educational finance created by the depression. Significant extensions were also made in program, definite clarification of certain rights of children and parents placed in statute form, and many laws were passed concerning teachers. These included advances in state requirements for certification, protection of the teacher through different forms of tenure, improvement in state salary laws and provision for retirement annuity plans.

There was a large void in plans providing for even permissive structural reorganization of local school districts. Apparently the economic-farmer stake in the one-teacher school district was too strong for the legislatures to overcome. So, while many gains were projected in the improvement of the schools, the major problem of true equalization of instructional effectiveness contingent on administrative reorganization went untouched. This omission is unfortunate and indicates clearly an area in which the teachers' state professional organizations should plan for improvement.

Audit Control

MANY educators who delve oratorically and emotionally into the field of financial support, with all honesty and seriousness of purpose, frequently do so with relatively little knowledge of the mechanics of finance or of the results that apparently innocuous elements of fiscal control entail.

During the past year's drive for federal aid to supplement state and local operating budgets, it has been frequently stated that federal subsidy, except "for audit control, which is purely mechanical," is easily possible without control. It has been our contention for many years that federal subsidy without control is impossible, and our resulting stand that federal aid should be requested for only those objects, such as buildings, in which these controls have a specific time factor. Audit control means policy control over a period of time and is frequently more dangerous than specific professional controls since they are carried out by technical specialists in accounting who are generally without knowledge of the field which they dominate mechanically.

In the July issue of The NATION'S SCHOOLS Supt. John A. True describes the control of local educational policy through mere "audit control" as exercised by the state auditor general's office in Iowa. It is a vivid description of what will happen in any situation when the accountant takes his work seriously. Independent study of conditions in Iowa indicates that Superintendent True was conservative in describing the operation of the new state auditing procedure.

In order to secure more positions for political appointees a statute was enacted in 1935 that gave to the auditor general's office the right to examine annually the accounts of all school districts. Although the control of school accounting already rested in the office of the state superintendent of public instruction, this new law deliberately gave to the auditor general, an accountant, specific authority over educational policy within the state. In order not to show the effects of this political device in increased cost to the state, all expense was mandatorily charged against the local district.

Since Iowa has many small one-room school districts, the cost of these rural audits actually has consumed an unduly large portion of the local operating budget. Scores of politically deserving auditors were hired on the strength of this statute. These auditors were assigned to field work at a salary plus traveling expenses, all of which fell upon already inadequately financed school districts.

The cost of examination would not have been serious if the accountants had remained within the confines of technical auditing. Apparently they did not agree with those educators who see no danger in audit control. They went far beyond technical examination of books into actual appraisal of expenses incurred. Normal expenditure practices, generally conceded to be well within the province of local board of education authority, were questioned and ruled illegal. They assumed judicial functions in determining what types of expenditure lay within their own strict construction of the law.

Since the courts in Iowa and other states have frequently ruled that boards of education have both im-

plied and discretionary powers, this assumption of authority to make legal appraisal of all expenditures simply means that, unless some school district appeals for court review, the control of policy now accrues to the auditor general. Further, the authority of the local district to expand its educational program in accord with need has been definitely restricted. Carried to its logical conclusion, it places the final control of educational policy in the hands of the auditor general and circumscribes the traditional freedom and independence of the school state.

Although it was not the desire of the legislature to remove educational authority from the constitutional state authority — the state superintendent of public instruction—the effect has been a centralization of power in a division of state government unfamiliar with the nature and needs of public education. Unless the local school districts unite in an effort to secure repeal of this law, the organization and operation of public education in Iowa will undergo a profound change in the future.

There is no reason to assume that audit control by the federal government will not result in similar control of state and local educational policy. The evidence of the federal comptroller general's office during the first Roosevelt administration should be sufficiently clear to indicate possibilities. Power follows the purse, and audit control is one means through which this power is administratively expressed. We repeat our warning that federal subsidy, except for physical objects, means federal control of educational policy. Centralized control of the educational function is definitely undesirable in our democratic organization. Interest groups with plans for federal aid would do well to redirect their programs into safer channels.

Research Service

THE busy administrator always has need for reliable current information concerning conditions, trends and problems in education. He is constantly confronted by demands from the board of education, the local press and teachers for authentic knowledge of conditions. Keeping the state and local districts informed is presumptively one of the possible branches of service that the federal Office of Education might render. Unfortunately, it appears impossible for this organization to produce live information of current value.

To remedy this need the American Association of School Administrators since 1924 has sponsored through the research division of the National Education Association means for keeping its members reliably informed. The work of this research service is of high quality and should be helpful to the local administrator. It is moderately priced at $25 a year and thus easily available to local school systems. Information is available concerning boards of education, child accounting, accounting, finance, plant operation, salary trends, elementary and secondary administration, taxation and general administration. The activity is worthy of greater support than currently expressed.

The Diamond Jubilee

THE seventy-fifth annual convention of the National Education Association was held in Detroit during the last week in June. In many respects the program was disappointing, lacking both in balance and in diversity in points of view. Federal aid, especially in constant exhortation to secure enactment of the Harrison-Black-Fletcher Bill, was much in the foreground. The general field of school finance, which requires consideration of a whole series of related factors as well as the mere desire for more revenue, was distinctly absent from discussion. This omission was extremely unfortunate because the problem of school support cannot be satisfactorily determined unless problems of control, structural reorganization, improvement of teaching service and curricular program, and sources of revenue are all given proportionate consideration.

Change in organization structure was acted upon by the legislative assembly but it is doubtful whether it will have much effect upon either structure or program.

Emphasis was placed on the need for a more aggressive membership policy and fear was expressed publicly for the first time that, unless the National Education Association concerned itself more definitely with teacher welfare, affiliation of the great mass of teachers with the American Federation of Labor or CIO was an immediate possibility. There was no consideration or critical comment on the pressure lobbying activities of the secretariat in the national congress. Here is an activity in which it might be well for the profession to consider its ethical responsibilities.

The most significant group of problems before the country today is the question of labor relationships. Certainly teachers should be well informed on all aspects of the question. While Henry Ford's official publicity man, William J. Cameron, appeared emotionally on four programs, no one was invited to present the labor point of view. The teachers, as impartial agents of the state, should always be willing to listen to both sides of every question without indicating partisanship. Too conspicuously absent from the program was Detroit's liberal Mayor Frank Couzens and Michigan's governor, Frank Murphy. At previous conventions in other cities and states these officials were at least present to make innocuous speeches of welcome. At Detroit their names were absent from the official program. It appears that those responsible for the program have something to explain.

Socially the convention was an unqualified success. Detroit teachers gave graciously of time and money to make the stay of the thousands of delegates a success. Professionally the convention was disappointing.

Radio and Education

THE increasing recognition of the radio as an important agency in adult education is gratifying. The success of the National Broadcasting Company in securing the services of Dr. James Rowland Angell, recently retired as president of Yale, is worthy of comment. Radio has many problems to solve in the educational field. Its theoretical possibilities require considerable thought and experimentation before they can become completely practical.

The retention of an able educator as professional adviser in the field of radio is significant evidence of its earnest desire for progressive improvement. Fortunately, Doctor Angell's temperament makes it impossible for him to act as a "big name" or in constant acquiescence to administrative whims. He will undoubtedly have an active share in improvement in the educational use of radio. We congratulate radio and extend our best wishes for success to Doctor Angell in this new connection.

Academic Freedom

IN THESE days when the practical limits of academic freedom are annoying to many college presidents and when institutions of outstanding merit such as Harvard and Yale make reprisals against teaching personnel for the expression of individual viewpoints, it is refreshing to find an institution that is courageous enough to face the problem directly by adopting written policies concerning its stand.

George Washington University has recently inaugurated a code governing academic personnel in which it sets forth clearly its attitude toward this vexing question. There may not be universal agreement with the details of this policy promulgation but it does represent a forward step that deserves both commendation and institutional imitation. These paragraphs are reproduced in full because of their sane and sensible treatment.

"1. The university will not place any restraint upon the instructor's freedom of investigation. An instructor, however, will take cognizance of university policies in regard to the coordination of research efforts and he will not permit his research to interfere with his teaching duties. The university has the right to request a member of the staff to plan his investigative work to contribute to cooperative projects when such have been undertaken by a vote of the appropriate faculty committee.

"A member of the staff may make a request of the university committee on research that his program be modified to permit him to undertake an approved research project which could not be undertaken without such cooperation.

"2. The university will not impose any limitation upon the instructor's freedom of exposition of his own subject in the classroom or in addresses and publications outside the university, except insofar as the necessity of adapting instruction to the needs of immature students limits the scope and character of instruction.

"3. No instructor may claim as his right the privilege of discussing in his classrooms controversial topics outside his own field of study. The instructor is morally bound not to take advantage of his position by introducing into the classroom provocative discussions of irrelevant subjects not within his field of study.

"4. The university will recognize that the instructor in speaking and writing outside the institution upon subjects beyond the scope of his own field of study is entitled to precisely the same freedom and is subject to the same responsibility as is attached to all other American citizens.

"If the extramural utterances of an instructor should be such as to raise grave doubts concerning his fitness for his position, the question should in all cases be submitted to a faculty advisory committee. It should be clearly understood that the institution assumes no responsibility for views expressed by members of its staff; and instructors should, when necessary, take pains to make it clear that they are expressing only their personal opinions."

Expenditures Are Rising

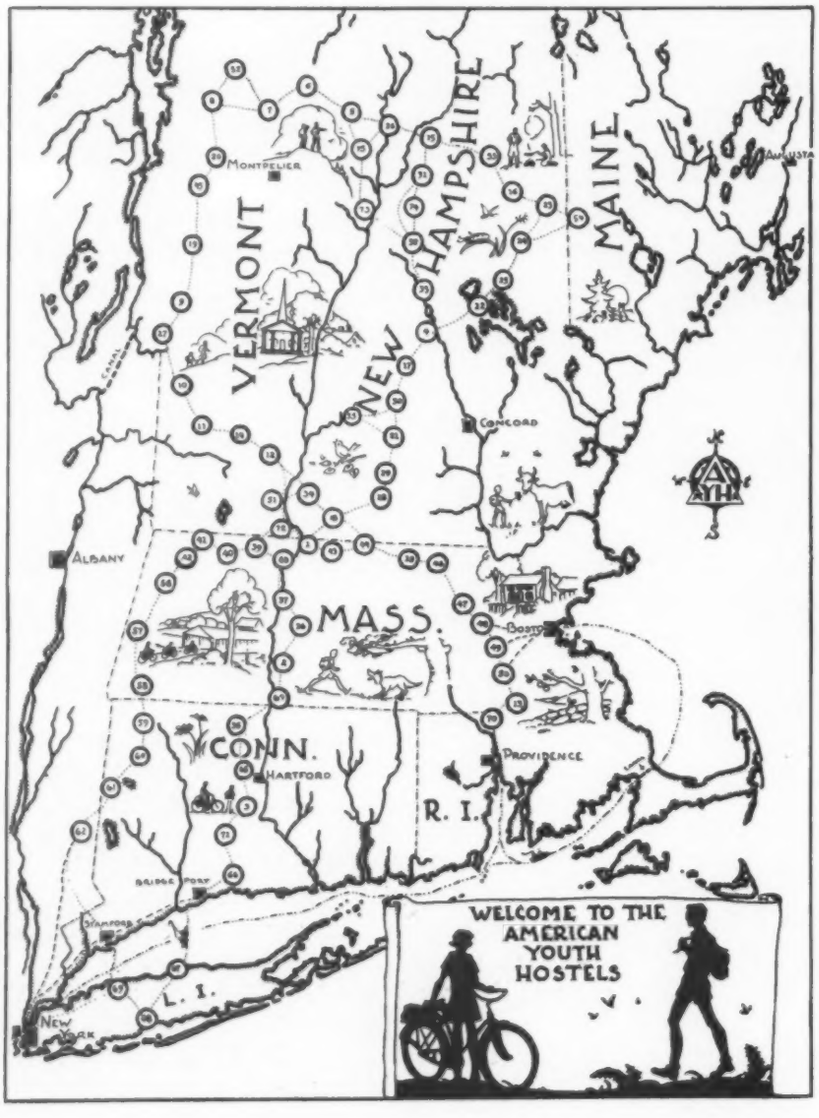
THE average expenditure per child for education in city school systems is rising, according to a report recently released by the United States Office of Education.

The range is from $70.84 in the cities between 10,000 and 30,000 population to $107.19 in cities above 100,000 population. The increase is 17.2 per cent higher than at the low point in 1933. As this report covered the school year 1935-36, it does not show the great improvement made during the academic year that has just closed. While much of this increase is naturally due to the restoration of teacher salaries, it is also spread significantly throughout the range of current expense.

The already existing school plant is definitely showing a return to predepression standards of physical condition, and purchases of essential textbooks and library books are rapidly mounting. The new 1937-38 budgets, which became operative July 1, indicate even more favorable conditions in urban centers. Capital improvement is the only item with a definite lag. Its return to predepression amounts is contingent upon direct state and federal appropriation for services of this type.

The Editor

Youth Hostels: America



By JUSTIN CLINE

THE Youth Hostel Movement, although new to the United States, is not a recent development in Europe, for its beginning dates back to 1910, when Richard Schirrmann, a European school teacher in Westphalia, conceived the idea. It was through association with his pupils that he sensed the need for young people to have travel experiences. He spent a great deal of time hiking and living with his pupils. He came at last to feel that "they were hungry for the opportunity" to live simply and to travel in the out-of-doors.

The boys and girls enjoyed this experience so much that young people from other localities sought Youth Hostels in their areas. The idea spread rapidly through Germany, Holland, France, Denmark, Czechoslovakia, England and into a total of eighteen countries. The Youth Hostel movement was like a pleasing personality winning friends everywhere.

In the summer of 1933, Isabel and Monroe Smith, the present directors of the American Youth Hostel Movement, were commissioned by Columbia University to take a group of high school pupils on a European tour as a project in international friendship. Part of their job was to make a detailed study of European Youth Hostels. The Smiths were astounded at the rapidity with which these American high school pupils grasped the significance of the movement. These boys and girls were fascinated by the new experiences afforded them. Before the summer's trip was finished, the practical value of hosteling to American youth had been demonstrated.

When the Smiths saw the wholesome effect of hosteling on both American and European young people, they came to the conclusion that

In New England there is a 1,000-mile trail with a Youth Hostel every fifteen miles. The map shows the routes, and the photographs are of hostelers arriving at Putney, Vt., after a hike.

A Youth Hostel is a facility for travel. It is a place at which bicyclers and hikers can stop overnight for the small charge of 25 cents. A hostel provides separate toilet and sleeping accommodations and common cooking, recreation and eating rooms for both sexes.

"Being on your own" and "learning by doing" are the two main points in the philosophy of the A.Y.H.

"Being on your own" means cooking your own meals, cleaning your own bunk and mess rooms, being responsible for your own health, planning your own program, making your own itinerary and traveling under your own steam. In other words, you

hostels would be a good thing for America.

Fortunately for the development of the movement in America, they were invited as guests to the international Youth Hostel conference at Godesberg, Germany, in September, 1933. There they were officially appointed to initiate the movement in this country.

Upon their return to the United States, with the savings they had earned as scout leaders, they purchased an old estate in Northfield, Mass. This building was converted into a Youth Hostel, opened and dedicated on Dec. 27, 1934. This first American Youth Hostel was named the Richard Schirrmann International Youth Hostel after the founder of the movement.

The purpose of the American Youth Hostel, Inc., "is to help all, especially young people, to a greater knowledge, understanding and love of the world by providing for them Youth Hostels, bicycle trails and footpaths in America; and by assisting them in their travels here and abroad." It intends to give young people a chance to enjoy outdoor life and to "escape supercivilized ways."

depend upon yourself to meet any situation that arises.

"Learning by doing" implies that one gains skills and attitudes by actual participation in such activities as cooking, skating, skiing, folk dancing, house cleaning, singing or language study whenever the opportunity presents itself. Good health, for instance, is learned through having actually to check oneself on his own personal hygiene.

Although the A.Y.H. philosophy calls on one to be independent it does not preclude attention to the welfare of others. On the contrary, one of the essential mottoes of hosteling is, "Not for myself, but for the group."

When visiting a Youth Hostel one is continually reminded of this motto because the whole atmosphere of a hostel is one of co-operation and helpfulness. The "working holiday," which means that young people will gather at a Youth Hostel to accomplish a certain task, such as building a fireplace or erecting a bunkhouse, is an illustration of the cooperative effort of Youth Hostelers.

The reason so many people are becoming interested in the Youth Hostel movement is because of the educational possibilities of its activities such as increased travel for young people; greater international cooperation and understanding among young people of the world; better health habits for youth; development and appreciation of important personality traits; enrichment of school curriculums; greater appreciation of nature and the out-of-doors; development of more wholesome teacher-pupil relations; closer interrelationship and cooperation between existing social agencies and organizations.

Travel by the Youth Hostel method is so reasonable that thousands of young people who have been unable to travel in the past will now have an opportunity to see some of the wonders of their world. For the last two summers it has been possible to hike or bicycle safely through New England Hostels for $1 a day.

One of the greatest benefits that came to the American youth hosteling in Europe was the mutual friendships that they cultivated. These American boys and girls became acquainted with French, German, English, Danish and other foreign young people. They traveled with them from one hostel to another and soon understood the viewpoints of their foreign friends. Before many weeks were spent in Europe, they understood how different life philosophies could be developed if one lived in a country like France, Germany or Denmark. They learned that the desires, hopes and ideals of these foreign young people were not much different from their own. Beyond all this they came to appreciate better their own American companions who had gathered from many states to go on the tour.

Two flatboating groups in the Connecticut River valley.

America's largest Hostel is the Richard Schirrmann International Youth Hostel at Northfield, Mass., where we see this jolly group eating lunch.

There are no "rules" at a Youth Hostel but there are certain important "customs," which were originated by Youth Hostelers themselves. Among these is the time for retiring at night. With few exceptions hostelers climb into their bunks at 10 p.m. Of course, after cycling or hiking all day one welcomes the opportunity to sleep. For at least eight hours all is quiet around the hostel. Everyone has adequate opportunity to rest peacefully and to regain the energy that is spent during the day. So one of the first principles of good health — plenty of sleep — is observed by Youth Hostelers.

Another important principle of physical hygiene is that one should have plenty of exercise to facilitate the elimination of body wastes and for proper muscular development. Certainly hiking and cycling furnish sufficient exercise to fulfill this requirement.

One cannot say with absolute surety that the food the hostelers prepare for themselves always makes a balanced diet because there must necessarily be a first experience in cooking one's own meals. Nevertheless the meals, for the most part, are wholesome and tasty and are thoroughly enjoyed.

By 1936 the New England hostels had proved successful. Their network mapped out a trail 1,000 miles long with a hostel located every fifteen miles. Hostelers from numerous states of the Union and many foreign countries gathered in New England to take advantage of the A.Y.H. facilities.

The New England Hostels, like hostels in Europe, are established in loops and chains. By having the hostels arranged in loops it is possible for a hiker or cycler to start from any hostel and come back to it without covering any of the same territory twice. Chains of hostels are used to hook up urban centers with rural areas. They are located approximately fifteen miles apart in order that even hikers can get from one hostel to another during the daytime.

At present there are seventy-six Youth Hostels in New England. Starting at Northfield, Mass., one may hostel north through New Hampshire to Mount Washington, west to Jeffersonville, Vt., and south through Western Vermont back to Northfield. At several points on this large loop there are smaller loops connecting from three to nine hostels. Chains of hostels radiate from Northfield in three directions: one extending east to Boston; one making a trail directly south to Long Island, and another extending southwest to Pawling, N. Y., which is near the north end of the Appalachian Trail.

About three-fourths of the New England Hostels are now open the year round. All of them can be used by hikers and cyclers and many, since they are located on horseback trails or near waterways, are open to equestrians and canoeists.

The hostel trails pass through quiet villages, skirt the shores of small lakes and follow mountain ridges. Whenever possible they are located on secondary roads or pathways.

For the most part the American Youth Hostels are set up in simple

farmhouses "where all of the fun of 'camping out' can be enjoyed without the risks of meeting inclement weather without adequate shelter for the night."

The largest hostel in America is situated at Northfield, Mass., where a large house and two barns have been remodeled so as to accommodate fifty boys and fifty girls comfortably.

One of the happiest recollections of my visit to the New England Hostels last summer was the gracious hospitality shown me by all of the house parents. Through them I became acquainted with the background of the particular localities and caught the spirit of New England.

Each one of the hostels has a local Hostel committee of ten persons who are responsible for the functioning of the hostel. Representative persons in the community are the members of this committee. It is common for a minister, a boy scout leader, a girl scout leader, the principal or superintendent of the local school, a representative of the parent-teacher association and the service clubs, and select men of the community to be on the Hostel committee. The local hostel is a community enterprise.

The growth of the American Youth Hostel movement, since the establishment of the first American Youth Hostel, has been enormous. During the first three months the first American Hostel was open 1,100 overnight guests were registered. From Dec. 27, 1934, to Jan. 1, 1936, there were 4,500 overnight guests in American Hostels, and during 1936 there were 9,000 overnight guests. In 1935 there were 1,750 passholders, while in 1936 there were 4,797 passholders.

In June, 1937, there were also in operation outside of New England the following hostels: Michigan, 12; Pennsylvania, 9; California, 6. In Canada there are now ten hostels.

Michigan, too, has its hostelers; these are headed for Saline Valley Farms. Hiking or bicycling is the usual method of transportation.

Safety Teaching in Seattle

By WORTH McCLURE

How starkly the sinister shadow of death or injury by traffic crash falls across the lives of today's high school pupils was revealed by a recent study in a Seattle high school.

This student body of 2,300, aged from twelve to twenty, the study revealed, had lost no less than 154 relatives, while 924 relatives had been injured. Personal acquaintances of this group to the number of 739 had been killed in automobile accidents while traffic injuries had befallen 1,876 friends and personal acquaintances. Small wonder that more than 1,000 of these pupils indicated their interest in an after-school class in automobile safety including study of traffic regulations.

Public schools have both a specific and a general responsibility arising from this mounting toll.

Direct instruction is a method now increasingly employed. An experiment in the school of Pennsylvania State College demonstrated the effectiveness of training by holding a group of high school pupil trainees free from traffic accidents over a period of several months. The high schools of Denver are instructing their pupils in traffic regulations and safety precautions through regular class instruction based on a specially prepared manual. The American Automobile Association has prepared a pamphlet known as "Sportsmanlike Driving," which is becoming widely used. Other materials are also being made available.

While modern education regards direct instruction as valuable it does not regard it as adequate by itself. Habits must be formed and attitudes must be developed. These can only be achieved through the medium of pupil activities.

In several Seattle high schools student committees conduct safety campaigns among their fellows. English classes prepare circulars for distribution. Art classes make safety posters. Public speaking classes appear before high school assemblies and the pupils in neighboring elementary schools for safety talks. The ablest speakers are selected for radio talks in cooperation with citywide safety campaigns. Student committees direct traffic about the schools.

An outstanding achievement was the organization in 1928 in elementary and junior high schools of the Seattle junior safety patrols. Supervised by a young police sergeant and the school principals the schoolboy members of this organization handled in 1935 more than 34,000,000 child-crossings in Seattle streets with only two minor injuries and no deaths. The otherwise perfect record was marred by a driver whose windshield was coated with sleet.

Buildings and scholarship funds are two ways the federal government can help education without infringing upon local control. At the right is the kindergarten in the new Tippecanoe School, Milwaukee, a federally aided project. The large bay window of glass blocks is a modern provision for light, privacy and temperature control.

Federal Aid, Again

By DAVID D. HENRY

THE case for federal aid for the maintenance of public schools, as commonly expressed, may be summarized somewhat as follows: Local school district treasuries are empty or depleted, and funds for restoration of schools to predepression effectiveness and for new achievement must be found elsewhere. The state treasury has been rushed by nearly every vested interest group sufficiently organized to maintain a lobby, and representatives of public education have not been able to secure the state assistance deemed desirable. Therefore, the federal treasury is the only remaining source of help to remedy the financial ills of the public schools.

Too often the cry for federal aid for public education has not been based upon a functional analysis of need to any greater extent than has the plea of the professional lobbyist representing a less worthy cause. Both have built upon the same base —a viewpoint that envisions the federal government as a vast holding pot of gold that spills over in the direction of the interest group that is able to exert enough pressure to tilt the pot its way.

Arguments of political expediency have been too much in the foreground in our thinking on this topic. Because a community or state has imposed certain tax limitations upon itself or refuses to analyze all of its sources of possible tax revenue is no evidence that federal aid for education is needed. We must first establish that our communities, local and state, have exhausted their ability to support education and that the other expenditures of the several units of government are more important than further expenditures on education before we have any right to call upon federal resources.

The basic question involved here has to do with a definition of the several relationships of the school to the home community, to the state and to the federal government. The premise for our thinking must be the maintenance of the independent school state wherein the management of schools is a partnership between the home and the state.

The history of the development of this concept is a long one. One school of political scientists disputes the rationality of the independence of school organization but the fact of its existence is not to be disputed; it is interwoven with the very fabric of local and state government. Its great significance on the present scene is the faith that as long as schools are controlled directly by the people, in local communities, democracy will weather the storm of transitional social and economic change. Dictatorships in Europe have been made possible by the organization of centrally controlled youth movements; they have been maintained by centrally controlled education. The preservation of local control of education is essential to the maintenance of the democratic tradition.

Since control invariably follows the purse, the benefits of local control can be maintained only by the existence of a maximum of local support. Those who argue for complete state support of education, or complete federal support, or a combination of both, ignore the question of local autonomy. There is something in the American tradition to encourage us to prefer an

impoverished local autonomy to a subsidized bureaucracy.

What is a maximum of local support? Not many communities are able to answer this question intelligently. It is admitted that education has not done well the job either of defining its needs or of interpreting its needs to the community. We have been content to confine our labors to the political considerations — how much can we get, and how can we propagandize the people to give more? We have no pattern or formula to determine when a community is adequately supporting its schools or when it is unable to support them.

The professional group has two definite responsibilities with regard to local support, a question that must be settled before we can be intelligent about federal support. They are: (1) leadership in a scientific analysis of school needs and their relationship to community wealth, and (2) leadership in interpreting those needs to the community.

Not until those needs are scientifically appraised, and not until the community's inability to fulfill those needs is definitely established, do we have any functional right to turn to the state for support.

State's Two Duties

In any discussion of federal aid to schools, we cannot overlook the state's responsibility to education. It is twofold: (1) to maintain a state system of education, and (2) to equalize educational opportunity.

In earlier days the state's method of maintaining a school system was to grant to local school districts certain tax powers. As the state has more and more increased its own tax collection powers, its responsibilities for direct maintenance of the school system have also increased. Under our present tax system, with local limitations, a certain basic state support for schools in all districts is admittedly necessary. In determining how far the state shall go in that maintenance, however, great care should be given to the preservation of the delicate balance between local and state authority if we are to preserve local autonomy. It is axiomatic, furthermore, that that basic support should follow the pattern of a functional analysis of a state program, involving a definition of scope, variety and quality, and a determination of the best organizational methods to achieve the objectives agreed upon.

It is to be admitted, of course, that in most states the schools need money beyond present resources for the kind of educational program socially desirable. While not pressing any claim as to the federal government's "obligation" to render assistance to the cause, we believe that federal aid can be granted to education in a manner which does not infringe upon local control and which at the same time has the weight of public policy to support it.

More Buildings

Two ways have been suggested. First, an annual appropriation for school building construction. A public works project of this kind would provide real assistance at a time when local and state social acceptance of educational needs is not strong enough to insist upon efficient local and state functioning. This federal program would provide indirect aid for schools and at the same time not interfere with present concepts, philosophy and control. Federal aid for school buildings, on an annual basis, would not only be an investment in public works, it would annually free more local and state money for maintenance and, most important, it would preserve the credit of the school district for times of emergency.

It is important, however, that we recognize such a building program as a part of a federal public works project. The aid to education would be indirect and the control and use of the buildings would be completely local. The economic effects of the program would be its justification, the same effects accruing from any federal aid in the improvement of public property. This program would harmonize with federal aid for highways, for harbors, for slum clearance and similar public projects.

The only excuse for direct federal aid to education, on the other hand, is the time-worn cry for equalization of educational opportunity. Objective students insist, without refutation, that aid on this basis, after states had completely exhausted their own resources — both in efficiency of reorganization and management and in tapping equitably all accepted sources of public revenue — would go only to a handful of states, ten or a dozen at the most. All other arguments have been those of expediency, dodging the issues of local control, state reorganization and new social interpretation.

A second sound device for federal assistance would be in the establishment of scholarship funds for students, both secondary and collegiate, who are genuinely in need of such aid to continue their schooling and who have proved their ability to profit by further educational opportunity. In having his choice as to place of education, the individual would block any semblance of federal control of the education program. The income from tuition paid by these students would increase school district and institutional credits, both public and private.

A precedent for this suggestion lies within the framework of the present NYA program. Its marginal work-relief wage should be eliminated as both economically and educationally unsound. The scholarship grant can be justified in terms of equalization of economic as well as educational opportunity.

Big Job Ahead

Even should federal aid be granted, however, and through channels thus defined as desirable in preserving present concepts and practices, our job would then be only started. We must finish the task, already feebly started, of stimulating the creation of a social force that will carry education safely through the political turmoils of our present legislative system. Up to the present time we have only imitated the professional lobbyists and have sought legislative controls in that manner. The long-time program cannot be built upon the accident of political shrewdness.

Education is a social enterprise. When it becomes professionally dominated and politically managed, it fails in its function. Conversely, the continued progress of education depends upon public opinion. The one hope for the support of the kind of educational program needed for our complex modern times is an active, appreciative, informed public opinion generated in the local communities.

Courses for Consumers

By B. J. RIVETT

Study of present status and trends in consumer education, both as a separate course and as a unit in other subjects, made among high schools of the North Central Association, shows demand for classes.

HIGH school instruction to aid the consumer in buying goods has been given in certain subjects for many years, but recently the term, consumer education, has appeared more often in educational literature. It is understood as instruction in the wise purchase of things that every person buys, such as food, clothing, furniture, household appliances, automobiles, insurance and investments. As one writer has said, consumer education should also result in a higher standard of living.

My aims were to determine the present status and trends of the subject in the secondary schools of the North Central Association both as a separate course and as a unit in other school subjects, and to learn the attitude of the public toward it. Do community organizations urge its teaching and is there any opposition on the part of retail merchants or manufacturers?

One of the reasons for the general public interest in the subject is the urge to buy more intelligently. High pressure salesmen use every appeal known to psychologists. The buyer wishes to get good value for his money and has been warned to beware in numerous books and special bulletins.

Everyone Must Spend

Why should the subject of consumer education be added or included in the secondary school curriculum? The best answer is contained in Briggs' Golden Rule of Education, namely, "The first duty of the school is to teach pupils to do better the desirable things that they are likely to do anyway." If this view is accepted, the secondary school should teach young people how to buy wisely because spending money is something that everyone must do.

In making this study the following procedure was followed:

1. Recent articles in educational magazines were read.
2. Some of the modern textbooks in home economics, chemistry, commercial subjects and economics were analyzed to determine the percentage of space devoted to the subject.
3. Interviews were conducted with the two supervisors of home economics in the Detroit public schools, with teachers who are experimenting with new courses and with teachers of adult consumer education classes.
4. Letters were sent to schools that have been experimenting with this subject and a questionnaire was sent to 318 secondary schools in the North Central Association. These schools are in twenty states and include schools of all sizes from small rural towns to large cities like Chicago and Cleveland.

Aids in Buying

At the conference on business education at the University of Chicago in 1934, Hazel Kyrk of the department of home economics read a paper on "Types of Information Available to the Consumer." In this she discussed five types and concluded that "most information available for aid in buying has to do with what goods are available and the desirable characteristics of goods." She said further that if consumers are to have the information they need "every field of knowledge has a contribution to make to this means of raising the standard of living."

James L. Palmer, professor of marketing, discussed "The Extent to Which Business Educates the Consumer." He advocated more rigid and energetic law enforcement against adulteration and misrepresentation, particularly in the food, drug, toilet goods and cosmetic industries, and consumer education through the universities and the secondary schools.

To quote Professor Palmer: "Up to the present time the problem has been largely ignored by both high schools and colleges. In my opinion it would be impossible to develop courses of instruction throughout our educational system which in a generation or two would very materially affect selling and advertising methods. . . . I recommend, therefore, particularly for our secondary schools, courses in which the student learns how, when, where and upon what to spend money."

Leonard V. Koos of the department of education reported on consumer education in the secondary schools. His evidence was based on two studies, one a master's dissertation by Richard Niehoff on the analysis of textbooks on social studies, and the second an analysis of textbooks in general business, home economics, mathematics, geography and science. The first showed little recognition of consumer education in social studies and the second that "the extent of recognition of consumer interests is meager." He concluded that "this important aspect of education is in need of vigorous expansion in our schools."

At the same conference, Henry Harap of Western Reserve University, who has done much work in this field, presented a paper on "Practical Methods in Consumer Education in the Schools." He said at that time that he knew of no more than two dozen courses in consumption.

The following are more recent magazine articles: Sophia Reed (*Illinois Teacher,* Oct., 1935) describes how consumer buying can be taught incidentally and as a complete unit in home economics. Ray G. Price (*Journal of the N.E.A.,* Feb., 1936) states that the home economics department is doing more than any department in the public schools to assist the consumer. He suggests that other departments can do much and he mentions specifically the subjects of chemistry, shop and social studies. L. R. Frembling (*Sierra Educational News,* Oct., 1936) describes a course in consumer education taught in the high school of Lodi, Calif. A trial class of thirty-five pupils met one hour a day and among other projects made a survey of the price and quality of coffee sold in the local stores. R. S. Hodsell (*Journal of the N.E.A.,* Oct., 1936) describes the course taught in the high school at Hiram, Ohio. He says that there has been no protest from local merchants and concludes that "consumer education has won a place in our high school curriculum."

An incomplete analysis of recent textbooks reveals an increase in the space devoted to consumer education. ZuTravers and Bullock's "The Business of Life," a commercial textbook, has 30 per cent of its contents devoted to buying. In Wilson's "Descriptive Chemistry," a half-year subject, 25 per cent of the pages are devoted to instruction in the composition and injurious effects of cosmetics, hair dyes, patent medicines and similar topics.

Home economics, a twelfth-grade course in economics as applied to the home and taught in Detroit, is almost entirely a course in consumer education.

Only 18 out of 158 schools in twenty states report a special course in consumer education. One hundred twenty-four schools teach units in home economics with a median of 20 clock hours' instruction a semester. More than half of the schools report units in economics and commercial subjects. From one-third to one-fourth of the schools teach units in chemistry, agriculture and health education. The median number of clock hours in all subjects is 14. Nearly all of the schools (137) believe that the school's offerings should be increased. Forty schools, or about one-fourth, plan to add additional units or courses. Few schools have tried both plans of organization, that is, as a separate subject and as units in other subjects.

Nearly one-fourth of the schools state that local organizations have shown an interest in consumer education. Only seven schools report opposition to teaching the subject and these were from chambers of commerce and drug stores. The drug stores oppose instruction because it decreases the sale of patent medicines. One principal in a suburb of a large city writes that the secretary of the chamber of commerce seemed to be more interested in where people should trade than in how wisely.

The arguments against a special course are as follows: (1) it reaches too few pupils; (2) small schools do not have enough pupils to form a class, and (3) a special course lacks integration and motivation because all situations would lack connections with real problems. On the other hand, Hiram, Ohio, and Lodi, Calif., report very successful special courses. Little Rock, Ark., states that a special course "gives a better chance to teach material in its complete form."

There is abundant evidence that the teaching of units in subjects such as home economics and agriculture may be made effective because it correlates with life situations. Wise buying of food and clothing is an important part of the course in home economics. Proper feed for farm livestock at the lowest cost is an essential part of the instruction in agriculture.

A survey of the letters from 158 schools indicates that there is an increasing interest in the importance of the subject, that it is taught chiefly as units in other subjects, that there is considerable interest manifested by local groups and that there is little opposition.

A complete study of the teaching of consumer education in the high school would require an extensive analysis of recent textbooks, of educational magazines, and replies from a large number of schools. However, this superficial investigation does indicate that there is a decided demand for more instruction. More emphasis on wise buying will be taught in home economics, economics, chemistry, commercial subjects, health education, agriculture and consumer mathematics. Some schools will want to experiment with a special course.

Watching Children Grow

By BERNICE BAXTER

FACTS pertaining to the physical growth of the six to nine-year-old child indicate that his whole physical make-up requires activity. Speech, the acquisition of concepts and ideas, as well as the more purely motor abilities, depend for their development upon exercise and practice.

During the early years of school, learning is largely of the sensory-motor type. Seeing, hearing and touching the elements within his own surroundings should be made possible for the child of this age. Opportunities for expressing the sense impressions gained through these first-hand contacts will clarify and give meaning to the individual impressions.

During the later years of childhood, nine through twelve or thirteen, the motor aspects of growth are still prominent. The intellectual interests are assuming more and more importance, but the period is one of great physical activity.

The social forces surrounding the child of this age are a complicating influence. While still in a formative stage of physical and emotional growth, he is faced with the necessity of adjusting previous learnings to the demands of an ever enlarging social world. The strain is great and home and school must work together closely to guide the child toward personal independence and social adjustment.

The New Road to Culture

By JOHN L. NIERMAN

THERE can be little doubt that the present age is one of gross materialism. We boast about the things we have and hold. We judge individuals too frequently by their investments in stocks and bonds rather than by their personal worth. We praise cities for their skyscrapers, their beautiful streets and public buildings, but are entirely unmindful of the squalor and misery that are housed in them. Spiritual values are completely buried in the quest for material things.

Our greatest asset as a nation is in the quality of our people. Understanding, conservatism, stability, balance, tolerance, morality, service to others—these must be the great factors in building and maintaining our industrial and national life. In this age of materialism, we must emphasize cultural and spiritual values.

I hesitate to use the words "culture" or "cultural" because they have displeasing implications resulting from misunderstanding. At once there flashes into the minds of many the idea of the impractical. The cultured man is the useless man. To others the cultured man or woman is the "highbrow" of the community. To many, in this day, culture means an external gloss applied from without and exhibited only from without. We speak of a "polished" gentleman. "Veneered" would be a good word, too.

But real culture is an attribute of the soul, the spirit and the mind. There is no great culture where there are not also a great soul, a great spirit and a great mind. It is not an external thing. The Master must have meant this when he said: "The kingdom of Heaven is within you."

In past years a rather sharp distinction has been drawn between cultural values and practical values. In recent years this distinction has become more pronounced. But we should be careful that we really know what is practical and what is not. Perhaps much that seems impractical needs only to be given a practical turn.

For the medical student to memorize "The Chambered Nautilus" may appear to him to be a ridiculous farce. But if the beauty of this poem stirs the soul of this young medic to noble action and a fuller life, if it ultimately leads him to become a great physician, both in practice and in spirit, then the poem is infinitely practical even to the medical student. And so it is with other lines of study and thought. It is time that we did something to reincarnate into the lives of our people the great cultural and spiritual values.

There are two things that we can do: (1) we can preserve our past culture (this can best be done by making cultural values practical) and (2) we must make practical values cultural.

Let us continue our interest in music, literature and art, but let us look for new revelations of truth, beauty, joy and power in the science of common things surrounding us.

The old roads of culture have long been known. Literature, music and art have had important places. No one doubts the cultural value of good books. Great music still "soothes the savage breast" and quiets the troubled soul. He who paints the dashing waterfall or a field of blue-bonnets, must somehow see the hand of God. We must develop these cultural values if we wish wisely to face the uncertain future.

The sciences hold cultural values as great as those in literature, music and art, with possibilities not yet explored. Moreover, science is alive today; the whole world is aquiver because of the development in science. Science is intensely practical, yet it stimulates the imagination. Can we not in the study of these practical and scientific things find cultural values?

Consider for a moment the science of astronomy. Eight planets have been fairly well known for some time. A few new ones have been discovered recently. These planets rotate around the sun. The earth completes the circuit in approximately 365 days. Jupiter makes the round in approximately eleven and seven-eighths years. These planets move on schedule and arrive on time. They never lose their course although they travel vast distances. Other planets or stars revolve about these eight. The earth has one moon, Jupiter has eight.

But these planets are mere points in the dome of heaven. Imagine every star that you see on a starry night revolving with reference to some other star and you have a better picture. It was the grandeur of a starry night that caused the psalmist to exclaim: "The heavens declare the glory of God and the firmament showeth His handiwork."

If a study of astronomy can bring this response to the human heart, then astronomy is practical, because reverence is practical. And so in technical, mathematical and scientific astronomy, we find cultural values.

Some years ago I visted the Natural Bridge of Virginia. The cutting of the rock is the work of ages. It bears the marks of the young surveyor, George Washington. The gorge has been modernized by sound and lighting effects installed by the Western Electric Company. Under the huge bridge seats are provided for visitors. Here with others I was seated. Then to my surprise the sound mechanism went into play. A quartet sang those grand old hymns, "O, Come All Ye

Faithful" and "Rock of Ages." In an irresistible surge the great past came rolling in upon me. Time—all time—was brought together in this one spot, and God himself seemed near. It was an experience I shall never forget. Geology is a practical scientific study. But it has great cultural value as well.

Let us go to the atom. Its contemplation lies within the realm of higher physics. Here, too, we have a central body analogous to the sun in the solar system. We call it the nucleus of the atom. Moving about this center, in distinct orbits, are the electrons. The first orbit has one electron, the second, two, and others eight, eighteen and thirty-two. The number of these electrons and their arrangement determine the nature of the atom. This is the general picture in a few words. Explore it as far as you wish. Test it with mathematical principles and deductions, bring to bear upon it all the principles of physics, and still its mystery escapes us.

In both universe and atom there exists the same general pattern. Do plan and order exist in the universe and in the atom? The universe and the atom answer "Yes." Let this concept creep into our souls. It will be good for us that live in a disorderly world made so by ourselves. Physics, too, has cultural values.

Chemistry deals with many practical things. At first glance they do not appear to have any cultural value. But the teacher of chemistry is negligent in his duty if he does not point out the real beauty that is hidden even in these common things.

Consider, for instance, the atmosphere. It is 20 per cent oxygen and 80 per cent nitrogen. That is a dry, seemingly uninspiring fact. But if it were different a serious problem would develop. Less oxygen would make breathing difficult. More would cause our bodies to burn up. A wrong adjustment would be equally disastrous to plants and animals. Is the 20-80 distribution of oxygen and nitrogen a wise provision? Is it part of a universal plan, ordained by a universal mind? Was this arrangement made for the need of plants and animals, or did the plants and animals adjust themselves to this arrangement? Or was it entirely accidental? Take your choice. But in either event there is plenty of room for reflection and speculation. The stimulus to reverence, to thoughtfulness, to orderliness, to purposefulness, to stability is there. And these are all cultural values.

Other illustrations of the cultural values of science can be found in biology, the science of living things. It is a beautiful story. It stimulates our thought and our imagination. We are brought face to face with the mystery of life.

We do not in the least minimize the cultural values of other subjects. But we do invite the teacher, the pupil, and the scholar, into the fields of science.

If this is indeed an age of science then more people than ever before are interested in science. Can we not, along with the practical values of science, emphasize the cultural values? Can we look nearer to our own day for cultural values and can we find them in practical things? Let us continue our interest in music, literature and art but let us look for new revelations of truth, beauty, joy and power in the science of common things.

Here lies a great responsibility for the teacher. We do not minimize the value of subject matter. It has its place. But we want to emphasize the need of the soul's response to the subject matter taught. Through subject matter and our own personalities as teachers we cultivate the minds, hearts and souls of those we teach. The imparting of subject matter is a small part of our job. The building of citizens — stern, stalwart, moral young men and women, with cultivated minds, hearts and souls—is our real responsibility as instructors.

Marks in Instrumental Music

By JOE BERRYMAN

THERE is no standard system of grading pupils satisfactorily in all subjects. Many subjects are highly specialized, and music, especially instrumental, is one of them.

A study of various systems used in a number of school bands and orchestras has revealed that systems of grading are as different as the organizations using them. It is neither practicable nor reasonable to offer any one system in the hope that it will prove satisfactory in all cases and set-ups.

One thought that should be given consideration in all systems is the fact that musical organizations include pupils of variant ages, experience and training. Because instrumental music in public schools is new and balanced instrumentation is the goal, there are pupils with less musical training on some instruments than on others.

A full band or orchestra is not organized in the first grade and carried through all the grades together, being graduated from high school at the same time. We have pupils in our organizations from all high school classes and in most cases from junior high schools and grade schools as well.

Generally two factors are considered in selecting membership: need of certain instruments and ability of the pupil to play near the band's level of proficiency. The fact that father will or will not purchase an instrument also is considered. Our pupils are not of the same musical experience nor have they received the same amount of instruction.

For the foregoing reasons we should grade instrumental music pupils on progress and not on playing ability. This is fair to all and gives first graders in music, whether they are eight or eighteen years of age, equal opportunity to receive recognition for their efforts.

In some of the larger school systems there may be musical pupils nearer the same age, but in most cases they have not had the same length of musical experience. In that case the progress system of grading should apply almost equally as well.

How Far Should They Walk?

By A. C. LAMBERT

AN OBJECTIVE solution to the question of what constitutes a reasonable maximum walking distance for pupils (and a reasonable minimum distance for school transportation service) underlies the organization and reorganization of school attendance areas and school administrative units; it underlies the problem of determining the required number and the size of school plants, and it underlies the equalization of educational opportunity.

A solution to the question is fundamental to the administration of school transportation and to the equalization throughout a state of those costs of transportation regarded as necessary in the local units. An exhaustive study of the literature justifies the statement that, partly because of its difficulty and partly because its significance has not always been seen clearly, the problem has remained in the realm of guess.

Apart from the important human elements involved, variation in the location of a limit to a maximum walking distance for school children makes a significant difference in the amounts of transportation that have to be provided and paid for.

Table I—Distribution of the Distances Traveled from Dwelling to School by Pupils Who Walk, Alpine Consolidated District

Interval in Miles	*1-2*	*1-6*	*3-8*	*7-9*	*10-12*	*1-12*
3.50-3.74						
3.25-3.49	3	7	6	2	1	10
3.00-3.24						
2.75-2.99	4	11	10	3	17	31
2.50-2.74						
2.25-2.49	18	62	64	25	54	141
2.00-2.24						
1.75-1.99	41	114	117	65	59	238
1.50-1.74						
1.25-1.49	98	273	290	163	116	552
1.00-1.24						
.75- .99	64	201	205	88	74	363
.50- .74	122	393	338	90	94	577
.25- .49	162	398	300	94	85	577
.00- .24	115	365	310	77	77	519
N	627	1824	1640	607	577	3008
Mean	.77	.78	.85	1.08	1.06	.87
S. D.	.63	.63	.64	.64	.76	.67
P. E. Mean	.017	.010	.018	.018	.021	.008

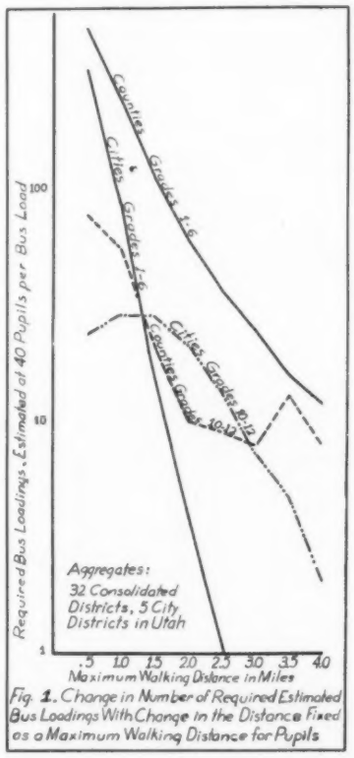


Fig. 1. Change in Number of Required Estimated Bus Loadings With Change in the Distance Fixed as a Maximum Walking Distance for Pupils

Figure 1, drawn upon a semi-logarithmic chart in which relative rates of change in the several curves are pictured fairly, shows how an estimated required number of school bus loadings in Utah changes as the maximum walking distance for pupils is moved in by half-mile intervals from 4 miles to ½ mile. The change is particularly rapid as the point moves in over the distances less than 1½ miles. The type of relationship shown in this figure to exist for Utah helps to show the financial bearings of the point fixed as a maximum walking distance (and a minimum transportation distance) for pupils. These principles apply to other states, but are particularly true in areas having maximum distances.

This report contains an empirical solution of the old problem, "What constitutes a reasonable maximum walking distance for school children?" The data come from a study of 16,000 pupils in three selected school districts in Utah—the Carbon County School District, the Alpine Consolidated School District, and the Granite Consolidated School District.

By several methods, accurate facts were obtained to show (1) the actual distances that pupils in all grades in these districts walk to school, (2) the actual distances that the pupils who are transported in these districts travel to school, (3) the time consumed in travel by those pupils who walk to school, (4) the time consumed in travel by those pupils who are transported to school, (5) the judgments of 2,200 parents and 280 teachers expressed with respect to the maximum distances that pupils of given grades should be expected to walk and ride to school and with respect to the maximum lengths of time that pupils should be expected to spend in travel from the domicile to the school.

Distribution tables were made to show the numbers of pupils in the several school grades who walk the given successive distances to school. These tables show that while some pupils under current conditions in

TABLE II—EMPIRICAL LIMITS IN MILES OF A REASONABLE MAXIMUM WALKING DISTANCE FOR SCHOOL CHILDREN*

Upper Limit	*1-6*	*Grades 7-9*	*10-12*
1. When upper limit is set by 9th decile	Miles	Miles	Miles
Alpine District	1.80	1.88	2.32
Carbon District	.94	1.28	1.29
Granite District	1.12	1.88	....
2. When upper limit is set by plus one sigma from mean			
Alpine District	1.41	1.72	1.82
Carbon District	.82	.93	.98
Granite District	1.00	1.64	....
3. When upper limit is set by found mean			
Alpine District	.28	1.08	1.06
Carbon District	.43	.50	1.08
Granite District	.59	.59	....

*Based upon 4,073 cases in which the actual distances walked to school by pupils were determined. Cases came from three selected consolidated school districts in Utah.

Utah walk as far as 3½ miles to school, the great majority of those who walk travel much shorter distances. In the Alpine Consolidated School District, for example, 86 per cent of the pupils who walk to school travel less than 1½ miles; 56 per cent walk less than ¾ mile, and 6 per cent walk distances that are beyond 2 miles. Table I on the preceding page shows the details for one typical district.

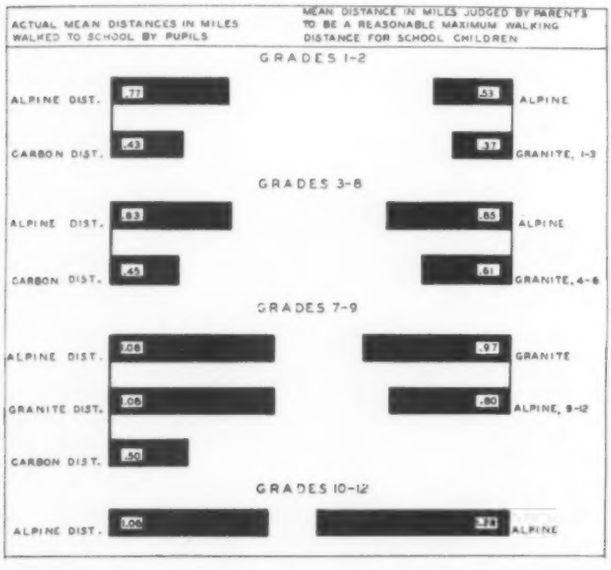
If one applies statistical measures to the many distribution tables, certain empirical norms can be derived. These norms are shown in Table II.

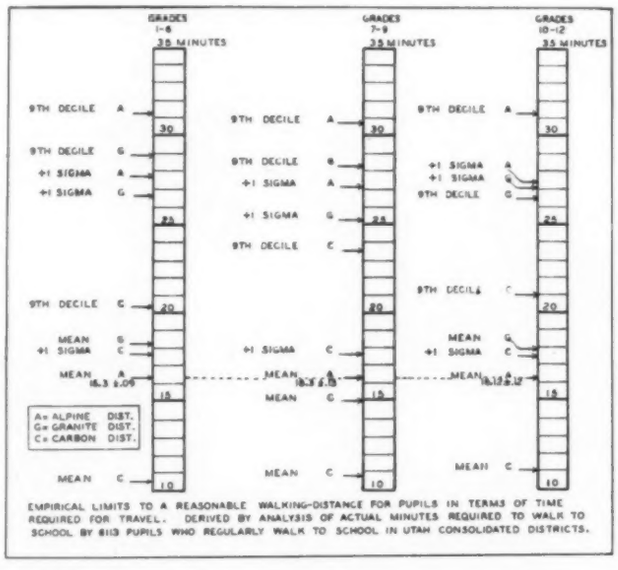
These norms, derived from current practice, suffer from whatever weaknesses underlie practice, but they show what apparently is found to be reasonably acceptable as maximum walking distances for school children in typical areas of Utah in which transportation has been used on a large scale for twenty years.

Current practice is not always the best guide as to what ought to be, but in this problem the mass of the data and the use of several central tendencies do provide significant tentative standards for walking distances. Certainly, these statistical norms provide a much needed fact basis for the correction of much of our present guessing about a reasonable maximum walking distance for school children.

Are these empirical norms reasonable? As a partial answer to the question, "Do these statistical norms indicate distances that should be set as maximum walking distances for school children?" a study of the judgments of persons was made. Twelve hundred parents in the Alpine Consolidated School District and 1,000 parents in the Granite Consolidated District expressed a judgment on this point. These judgments about maximum walking distances for children were obtained prior to the inauguration of the study of the actual distances walked by school children. The mean distance judged by 1,210 parents in the Alpine district to be a reasonable maximum distance for pupils in grades 1 and 2 to walk to school is .52±.007 miles. For grades 3 to 8 this mean distance is .85±.009 miles, for grades 9 to 12 it is .80± .011 miles. Teachers in the same district set the same maximums on the average at 0.87 miles, 1.16 and 1.34 miles for the same series of grades. Male teachers set greater distances than did either female teachers or parents.

The distances judged to be reasonable maximum walking distances by parents on the average are consistently shorter than are the mean distances actually walked by pupils in the same district, and the distances judged by teachers on the average to be reasonable maximum walking distances are consistently greater than are the mean distances actually walked by pupils in the same district. The judgments of parents from sev-




GRADES 1-6
GRADES 7-9
GRADES 10-12
35 MINUTES
9TH DECILE
+1 SIGMA
MEAN
A= ALPINE DIST.
G= GRANITE DIST.
C= CARBON DIST.
EMPIRICAL LIMITS TO A REASONABLE WALKING-DISTANCE FOR PUPILS IN TERMS OF TIME REQUIRED FOR TRAVEL. DERIVED BY ANALYSIS OF ACTUAL MINUTES REQUIRED TO WALK TO SCHOOL BY 813 PUPILS WHO REGULARLY WALK TO SCHOOL IN UTAH CONSOLIDATED DISTRICTS.

Figs. 2 and 3—The figure at the left gives a comparison of limits fixed for a reasonable maximum walking distance when the limits are derived statistically from practice and from the judgments of parents.

Walking distances of pupils established by school board policy or law should be adjustable. Climate, road conditions and type of community structure are factors to be considered. Walking speeds will vary, of course, for children of different grades.

TABLE IV—ACTUAL MEAN DISTANCES TRAVELED BY PUPILS WHO WALK TO SCHOOL REGULARLY IN UTAH CONSOLIDATED DISTRICTS

Grades	*Alpine*	*Granite*	*Carbon*
1-2	.77 ± .017		.45 ± .028
3-8	.83 ± .011		.45 ± .012
1-6	.78 ± .010	.59 ± .021	.43 ± .013
7-9	1.08 ± .018	1.08 ± .028	.50 ± .020
10-12	1.06 ± .021		.59 ± .027

The norms derived separately in these three districts are not in complete agreement, but they do not differ violently. While there is not absolute agreement between teachers and parents in the same county or between parents themselves and teachers themselves, there is clear evidence in these data that parents and teachers would fix a limit to the distance beyond which even senior high school pupils should not be expected to walk to school that on the average is distinctly less than the limits of 2½ miles traditionally quoted by writers and incorporated into the present Utah law. For elementary pupils the limit would be placed as an average at less than 1 mile.

TABLE III—MEAN DISTANCES JUDGED BY PARENTS AND TEACHERS TO BE REASONABLE MAXIMUM WALKING DISTANCES FOR PUPILS

	Judged Mean Maximum Walking Distance			
	Parents		*All Teachers*	
Grades	*Alpine*	*Granite*	*Alpine*	*Granite*
1-2	.53 mi.		.87 mi.	
1-3		.37 mi.		.46 mi.
3-8	.85 mi.		1.16 mi.	
4-6		.61 mi.		.78 mi.
7-8		.97 mi.		1.22 mi.
9-12	.80 mi.		1.34 mi.	
10-12	1.28 mi.			1.51 mi.

eral different towns in a county differ but little on these points. A small but consistent increase in distance appears as the judgments are expressed about distance limits for pupils in grades 1 to 3, 4 to 6, 7 to 9 and 10 to 12.

It is significant to discover that when the ninth decile of actual practice is taken as an upper limit, the highest limits that occur in the case of grades 1 to 6 and 7 to 9 do not exceed 1.88 miles. This is a greater distance than the traditional ½ mile and ¾ mile often suggested as a walking limit for these grades of pupils. When the norm is set at the mean of actual practice, the limits of distance found in actual use for grades 1 to 6 fall to .43, .59, and .78 miles respectively in the three districts. On the basis of the mean and in round numbers the actual limit of walking distance found in practice for pupils in grades 10 to 12 is 1 mile.

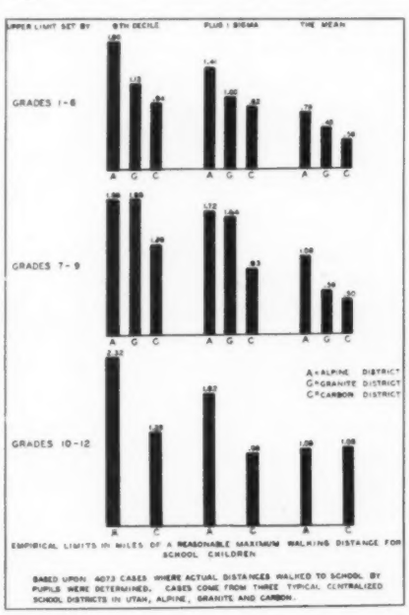

UPPER LIMIT SET BY
9TH DECILE
PLUS 1 SIGMA
THE MEAN
GRADES 1-6
GRADES 7-9
GRADES 10-12
A=ALPINE DISTRICT
G=GRANITE DISTRICT
C=CARBON DISTRICT
EMPIRICAL LIMITS IN MILES OF A REASONABLE MAXIMUM WALKING DISTANCE FOR SCHOOL CHILDREN
BASED UPON 4073 CASES WHERE ACTUAL DISTANCES WALKED TO SCHOOL BY PUPILS WERE DETERMINED. CASES COME FROM THREE TYPICAL CENTRALIZED SCHOOL DISTRICTS IN UTAH, ALPINE, GRANITE AND CARBON.

Fig. 4

These statistical norms are not proposed as the desirable limits to establish in policy or in law at once. It may be that only good experimental studies made jointly by administrators, psychologists and medical experts will solve finally this problem of a maximum walking distance for pupils. But the facts reported here justify the establishment of limits for walking distances that for purposes of a minimum program are less than the 2½ miles now often established in law, and for purposes of local practice regardless of a minimum program they justify limits below 2½ miles.

Norms for walking distances of pupils established in school board policy or in law should be adjustable to such factors as climate, road conditions and type of community structure. Norms could reasonably be introduced for these groups: grades 1 and 2, grades 3 to 6, grades 7 to 9, and grades 9 to 12 or 10 to 12. An alternate grouping is grades 1 and 2, grades 3 to 8 and grades 9 to 12. Either of these proposed groupings provides for adjustment to age and physical abilities of pupils as well as to school organization theory.

The empirical norms established here will be of greater worth in fixing actual maximum walking distances for pupils than is the opinion of individuals who are uninformed.

Catching Up

Our secondary schools in the last five years have somehow provided for almost 2,000,000 extra pupils in facilities designed for 5,000,000. There has been little new building, teaching staffs have actually been reduced and expenditures have been drastically curtailed. This means that while our schools should have made a sudden adaptation to a more heterogeneous population than they have ever before attempted to educate, they have had to return to a more formal, uniform program, eliminating numerous elements that might have given the new arrivals in school an education more suited to their needs. To provide an appropriate education for these children and for 3,000,000 other children of high school age not now in school is the responsibility we undertake if we favor universal secondary education. — From *Issues of Secondary Education*, Department of Secondary School Principals, N. E. A.

Let's Make Activities Active

By IRENE MURRAY LANSING

A FEW years back, every high school developed an almost riotous activity program. In the lush late 20's, it even began to be felt that the activity was worth teacher time—expensive and superior teacher time.

Economic pressure reduced everything to leanness, but teachers still carried on generously with activities. Salaries were reduced, load was increased, but no teacher worth the title considered the proposition of fewer activities or less personal effort on them.

However, taking inventory is a businesslike proposition even in the professions and, last spring, West Seattle High School decided to take stock of her activities. What she found was surprising and disturbing.

Most Clubs Are Anemic

First of all every teacher seemed to be leading along at least one more or less anemic club. If the club was in its first year, it probably was going under its own power, but the older clubs were definitely feeble and leaning heavily on the teacher adviser. Considering that in Seattle the teaching force is still carrying part of the depression reduction in salary, which totaled 37 per cent of the scheduled rate, this activity load was a really big item. Teachers reported that they were giving from one hour to twelve hours a week of out-of-school time. This, while the teaching load was far larger than normally!

Of course, this donation of time would not be questioned (or resented) if results justified. But, frankly, did they?

A survey of the whole proposition showed this: That of 1,839 pupils studied, 978 belonged to no club of any sort, and that 1,222 belonged to none in school. Some 560, or 31 per cent, belonged to school organizations. Now, considering that there were at that time some twenty-five clubs, ranging from French to chess, from camera to debate, and that teachers gave their time to this program, the proposition seems unbalanced. But consider the further fact that the students who do belong do not take an active part and do not attend regularly. Four or five, at best, carry on in the average club.

Perhaps this school is not typical, but it would seem to be. Almost all the pupils are white and American born. Only 15.9 per cent help support themselves. In many schools that figure is much larger.

The boys particularly seemed uninterested in belonging to groups. Of 917 boys, 676 belonged to no school groups.

When district clubs are taken into consideration, it is found that the same pupils who take part in school activities also belong to community groups.

All this would seem to warrant a scrapping of most activities, if there were not other angles. One of these was the pupils' own opinions.

Hobby Talks Arranged

Every year, we hold a vocational conference, but the last one was changed to a leisure-time conference. Speakers, chosen for their personalities as well as their preeminence in hobbies, were advertised two weeks before the conference date. Pupils elected their talks, which ranged from the "Art of Conversation" to the "Campus as a Place to Enjoy," covering twenty subjects. Some groups were very large; some, as small as fifteen.

Two days before these hobby talks, the conference committee sponsored personality assemblies. At separate boys' and girls' assemblies two remarkably fine speakers talked on the subject of personality.

On the day before the actual conference, a short build-up lesson was given in the roll rooms. A message to the teacher stressed the aim of the conference; a questionnaire, planned to take about ten minutes, directed the pupils' attention toward living completely.

On the Tuesday following the conference itself, pupils were asked for their reaction. It was more than 99 per cent enthusiastic, and nearly all answers included a written request for another such meeting.

What Is the Answer?

This enthusiasm seemed unreasonable, considering the indifferent club participation, so the adviser made use of the aroused interest and held a parley with the activity leaders. Discussion was free, and criticism was frank. The youngsters had a great deal to say about activity conditions and offered their suggestions, some of which seemed good. During the rest of the semester, we took every available means of getting student reaction, using round tables, discussion classes, papers, questionnaires and conferences until we had a pretty fair cross section of student opinion.

Out of it all came a little concrete information and a good many suggestions. One fact that seems interesting is that no club membership was found to have a scholarship average below passing, and none was above a B average. The suggestions seem to point out the necessity of making clubs and activities themselves more generally alive and alert. Otherwise they are not worth the effort the advisers give.

High school pupils when consulted show themselves interested in hobbies, intelligent in a desire to use leisure time well. It would seem, then, to be up to activity advisers to utilize existing interests and to create new ones, to revamp those clubs that are worth while; to make them self-asserting, and to discard those that merely swell the number of extra-curricular activities without making any real contribution to the youngsters' development. In short, let's make each of the activities active!

New Laws on Finance

Passed Before Legislatures Adjourned

By M. M. CHAMBERS

THE long recognized necessity of shifting the tax burden from homes and farms to other sources of wealth continues to produce new tax laws for school revenue, though progress is painfully slow.

This year Alabama enacted a 2 per cent consumers' sales tax, with exemptions of farm products, gasoline, used automobiles, textbooks, newspapers and advertising. On sales of new automobiles the rate is only .005 per cent. Three-fourths of the proceeds of the sales tax are earmarked for the Alabama special educational trust fund, out of which educational appropriations are paid. Educational leaders in that state are aware that the practice of earmarking tax revenue is not usually regarded as desirable, but were driven to this expedient by a court decision which in effect declared education to be a nonessential function of the state, and gave practically all other expenses of government prior claims on the state's general fund, with the result that there has not been sufficient revenue to pay educational appropriations in full for the last five years. Consequently earmarking legislation has been repeatedly pressed to protect the schools, and now about 87 per cent of state appropriations for public schools come from allocated taxes, and only about 13 per cent from the general fund.

Tax Measures

Arkansas reenacted the sales tax and eliminated the drug and food exemptions. The school fund will receive 50 per cent of the net proceeds, instead of 65 per cent, as heretofore. It is uncertain whether these changes will produce a decrease or an increase in the amount now received annually by the school fund from this source, which is about $2,340,000.

Maryland proposed a constitutional amendment, to be submitted to the voters, authorizing the legislature to impose state taxes on incomes. This state also reclassified several types of insurance companies for purposes of taxation so that they will be taxed at the full county and state rates in the same manner as ordinary corporations. Maryland enacted a law prohibiting the diversion of gasoline taxes to the support of public education or to any other purpose not directly related to the construction and maintenance of roads and bridges. In view of current social trends, this result of the perennial battle between the highway interests and the schools seems unfortunate.

Referendum in Maine

Maine enacted a 1 per cent sales tax to provide revenue for a program of old age assistance and to guarantee a minimum educational program. The act carries a voluntary referendum clause which requires it to be submitted to the voters of the state on August 16. Approval of a majority of those voting will be necessary to make it effective. It provides also for a 3⅓-mill tax on all property, the proceeds of which would be combined with the income from the permanent school fund, half the proceeds of the franchise tax on banks and an appropriation of $500,000 from the general fund, to form a state school fund to be distributed to the towns in aid of elementary and secondary schools. All such schools would receive $100 per year for each teaching unit, and the state would pay two-thirds of the tuition of secondary pupils attending schools outside their home towns, provided this did not exceed $70 for any pupil or $700 for any one town in any year.

Of the state school fund, $125,000 would be reserved for use as an equalization fund for the aid of towns in which a tax of 12 mills fails to produce sufficient revenue to provide $783 per elementary teaching unit and $1,305 per secondary teaching unit, plus an amount sufficient to provide for transportation and tuition of secondary pupils who may attend in other towns. The amount of equalization aid for transportation must not exceed half the cost of such transport. Determination of the necessary number of teaching units would be in the discretion of the state commissioner of education.

Alabama's new minimum program law provides for an equalization fund of $6,042,516. Delaware appropriated for general school support $3,514,000 for each year of the ensuing biennium. Other appropriations in Delaware included $286,000 for restoration in full of the teachers' salary reductions which were required by an act of 1933. North Carolina's state school appropriation for the ensuing biennium exceeded that for the previous two years by $8,452,527, and provided for a 10 per cent increase in teachers' salaries.

State Aid

Oklahoma appropriated $12,800,000 for each of the next two fiscal years for state aid to public schools, and directed that each year the state board of education shall apportion *pro tanto* to all school districts an aggregate of $1,800,000 to replace the revenue lost by reason of the exemption of homesteads from *ad valorem* taxation, which was provided for in an act approved Jan. 8, 1937.

Of the remainder of the appropriation, $5,200,000 must be apportioned as "primary aid," and $5,800,000 as "secondary aid." The former goes to all districts levying and using not less

than 8 mills and is for the payment of teachers' salaries, being apportioned in amounts ranging from $50 to $85 per month per teacher, according to the grade of certificate held. Secondary aid goes to districts levying at least 10 mills, to fill the gap when a levy of 10 or more mills does not produce sufficient local revenue, plus state primary aid, to finance a state-defined minimum program.

To qualify for either type of aid a district must vote an eight-month school term, and the state minimum program is in terms of a nine-month school year. The new act diverts to the general fund of the state all state revenues formerly allocated to school funds, and thus abolishes the practice of earmarking taxes for the schools.

West Virginia appropriated $13,250,000 per year to supplement the general school fund. Of this amount, $12,100,000 is to be paid to the school districts for purposes specified in pre-existing law as "primary state aid." The remainder is to be distributed without strings and will be expendable by local school boards for any current expenses. Unexpended balances in these appropriations or in the general school fund are to be distributed as "supplemental or secondary state aid" subject to the approval of the state board of public works, as provided in earlier statutes.

Kansas Joins the Union

Kansas enacted a state aid law, effective March 30, 1937, but inoperative until funds accrue from the sales tax which went into effect June 1. It applies only to elementary schools and guarantees that each such school having twelve or more pupils in average daily attendance shall have a budget of at least $675, provided it levies at least 3 mills on tangible property. For schools having two or more teachers and at least twenty-five pupils, the state similarly guarantees a minimum budget of $27 per pupil.

Washington set up a state school equalization fund, authorizing the governor, beginning June 8, 1937, to transfer thereto from time to time amounts up to $3,000,000, if and when such funds are available. The distribution is to be to districts in which the maximum local levies permitted without a vote of the electors produce a sum less than 15 cents for each day of "constructive attendance." This phrase includes in addition to actual attendance, extra allowances for high schools, special schools and transportation. The state is authorized to pay the difference between this minimum and the actual revenues of the qualifying districts.

Washington also enacted an *ad valorem* tax of 1½ per cent on all privately owned automobiles and earmarked this revenue for the counties for purposes of educational equalization. Under earlier law, a county tax was required to be levied sufficient to produce 5 cents per pupil per attendance day. The new act stipulates that in no case shall this county tax exceed 1¼ mills, and that wherever this levy does not produce 5 cents per attendance day, the state will make up the difference. Automobiles are exempted from all *ad valorem* taxes for other state, county or municipal purposes. The act becomes effective on Jan. 1, 1938.

Other States Provide Funds

Nevada allocated approximately $100,000 per annum for the next two years to the state distributive school fund from the proceeds of the state liquor license tax. South Dakota provided that the school districts shall receive 35 per cent of the proceeds of the sales and net income tax instead of 32 per cent as hitherto. Of this 35 per cent, 28 per cent will replace the revenue from local property taxes, being apportioned on the basis of the school census. The remaining 7 per cent will be distributed to distressed districts on the basis of need, as determined by a commission consisting of the governor, the director of finance, the director of taxation, the commissioner of school and public lands, and the superintendent of public instruction.

North Dakota amended and reenacted the state equalization law. The first $500,000 accruing to the fund each year must be apportioned to needy schools on the basis of need as determined by the superintendent of public instruction within limits fixed by statute. Districts receiving aid must issue in return for it certificates of indebtedness bearing interest of 4 per cent and payable as taxes therefor are collected. The only exemption from this requirement is for districts having no statutory authority to issue such certificates. Thus the equalization fund is to some extent merely a revolving loan fund. No district may receive aid for more than seven months of any year and may expend it only for teachers' salaries for the current year.

The second claim upon the equalization fund is for the payment of $1.50 per week of attendance to each district offering approved high school instruction for each nonresident pupil in attendance, which sum must be the sole charge made against nonresident pupils.

The third claim is for a sum not to exceed $65,000 for the biennium, at the discretion of the state board of administration, to pay the cost of offering high school work by correspondence. An act of 1935 established the center for correspondence instruction at the state agricultural college. The balance remaining in the equalization fund after all preferred appropriations are paid out is to be distributed among the public school districts and county agricultural and training schools at the rate of not more than $120 for each grade or high school "teacher unit." The superintendent of public instruction is to define this unit with due regard for varying local conditions and estimate the amount likely to be available for each such unit from the equalization fund each year.

Another new statute provided for the reimbursement in full of the state hail insurance fund of the amount diverted therefrom to the school equalization fund in 1935. This requires the payment of $1,038,865.41 out of the equalization fund in five equal annual installments, beginning July 15, 1938.

Tax Limitations

Washington limited the county tax levy to 10 mills, including the levy for the county school funds and limited local school district levies to 10 mills except when higher levies may be authorized by special election. However, either the county or the school district may make additional levies without election for the purpose of paying interest or principal

on bonds outstanding as of Dec. 3, 1936, or on warrants outstanding as of Dec. 8, 1932. Interest and principal on obligations incurred hereafter must be met from the regular 10-mill levy or additional levies authorized by special election. The number of voters necessary to make such an election valid was reduced from 50 per cent to 40 per cent of those voting for governor in the last gubernatorial election.

Utah permitted local districts to levy up to 10 mills. Under the prior law districts having a valuation of $3,000 or more per child could levy only 8.5 mills, those having $4,000 or more per child were restricted to 7.5 mills, and those having $5,000 or more per child could levy only 7 mills. Kansas provided that whenever a grade school and a high school are maintained by separate levies in the same territory by overlapping districts, the total levy for both purposes shall not exceed 14 mills. This loosens the earlier rigid limit on the grade school levy. The new statute also authorizes the local school levies to produce as much as $30 per pupil of school age and $40 per pupil in attendance in high school.

Alabama prohibited boards of education from spending for current expenses in any year more than the revenue receipts for that year. North Dakota required a statement of actual receipts and expenditures from the beginning of the school year to June 2, and of estimates to the end of the school year, to be posted in the school polling place and to be read aloud at the opening of the polls on the school election day.

West Virginia stipulated that each county board of education must prepare within the first month of each fiscal year a detailed statement of receipts and expenditures for the previous year, and an itemized list of debts and interest thereon, showing the purpose for which incurred and the date of maturity, on forms prescribed by the state tax commissioner and the state superintendent.

Florida enacted a law establishing a budget system for county boards of public instruction, prescribing the procedures to be used in preparing and adopting budgets, levying taxes, making expenditures and accounting for county and special tax school district funds. County school budgets must be submitted to the state superintendent of public instruction and cannot be officially adopted until he has certified them as properly prepared under regulations adopted by the state board of education. If he deems the tax levies specified in a county budget inadequate to assure proper support of the public free schools, he may require the budget to be amended so as to increase levies, but not beyond the 10-mill limit.

One-Room Progressives

By FRANCIS L. DRAG

MODOC COUNTY, located in the extreme northeastern corner of California, with its forty elementary schools (thirty-four of which are one-room schools) spread over 4,000 square miles of timbered mountains, fertile valleys, semidesert sagelands and lava beds, is a typical California rural educational unit.

The educational unit in Modoc County, like other California counties, is the school district; it is governed by an elective board of three trustees. The county superintendent of schools is the elected head of the school system, being assisted by one general supervisor of rural elementary schools. Rural school supervision in California applies to schools having fewer than 300 children.

Of the fifty-two elementary teachers employed in this county, 38 per cent are graduates of four-year colleges, a like percentage have been certificated on county board examinations, and about 25 per cent have credentials from two or three-year teacher training institutions.

The supervisory program consists of school visits, teachers' meetings, bulletins and office conferences. Although no definite schedule of visiting is arranged, schools are visited on the average of six times a year. Some are visited more frequently, depending upon the need. Except for the winter months of December and January, teachers' meetings are held monthly in each of the three geographic sections of the county set up for this purpose. Meetings, visits and conferences are chiefly related to the improvement of teaching through demonstration, cooperative planning of instructional units and conferences on individual problems.

This brief description of the area, as well as the administrative and supervisory plan, will indicate the problems encountered during the last two years in the attempt to construct a curriculum in keeping with progressive trends in education. Child growth has been the keynote of the program; it is recognized that child growth must be directed through channels that provide for the mental, social, emotional and physical development of children in the elementary school. Toward the end that "education is life, growth, a social process and a continuous reconstruction of experiences," the program has been planned to provide activities that will most

directly contribute to the realization of this goal.

It has been the specific purpose to provide for wholesome physical development, to train for social living, to offer opportunity for individual development, to stimulate success and minimize failure; in short, to develop each child to his fullest potentialities for good citizenship.

Provision for Health

Training for healthful living has rightly come to be recognized as the first requisite to child development. The school realizes that proper health habits come from practice rather than from precept. Throughout the school day, activities lead to healthful living through actual participation. A unit of work for all age levels on "Living Together in School" challenges first as well as eighth grade pupils. There are problems of interest to all pupils, which contribute to "health" as a vital, real daily activity.

There is a wash bench to be constructed. The plan is made and the construction is begun by the older pupils. Younger ones have a part, too; they listen to the discussion, taking part when they can; they write cooperatively about the job at hand. Someone suggests a soap dish, so constructed that excess moisture drains into a reservoir, leaving the soap firm and clean.

Such an activity includes daily inspection of and by the pupils, the keeping of weight-height charts, provision for play activities, supervised noon lunches, a study of school lunches, the planning of menus, the keeping of records on sleep, a study of clothing and care of the body. It involves discussion, research, reports, writing, dramatization, drawing and general activity that is real, purposeful and enduring.

Children in scattered and remote rural areas do not always have the benefit of periodic medical examination. To overcome this handicap in some degree, a series of clinics is arranged on a bi-yearly schedule. At this time the county physicians and dentists give their services without charge. Traveling from center to center, the doctors examine each child. A report of the examination is made in triplicate, one for the parent, one for the school and a third for the rural supervisor. Children who show serious eye trouble are later examined by an eye specialist who comes to the county for the special purpose.

Many children whose parents are financially handicapped are found to be seriously in need of corrective work. This problem has been partly overcome through the establishment of a school children's health fund, which is made possible through contributions by public spirited groups, such as parent-teacher associations, Rotary club, and county teachers' association, together with direct provision in the county budget. Corrective work is confined to tonsils, eyes and teeth. Whenever possible, the parent agrees to repay to the fund in small payments the amount of the cost of correction. Through the interest of local medical men, greatly reduced rates are made possible for these special services.

Socializing Experiences

Participation in group situations that call for the best that is in each child is another important factor in the development of the individual. The child must have opportunity to work and plan with others, to judge for himself, to recognize worthy endeavors of others, and to feel that he is a useful member of a group that expects him to contribute to the solution of the numerous problems that are continually arising. Opportunity for such development provides multiple situations for social intercourse.

The school club with its provision for pupil self-government and the manifold situations arising out of class enterprises afford all members of the class desirable socializing experiences. The school paper as an outlet for individual and group expression on school life, the excursion as a means of group investigation, or the care of the school plant as a means of awakening responsibility of the individual and the group for the care of private and public property, are agencies of great value in building useful citizens.

To provide activities of the foregoing nature, the scheduling of periods for work during the day becomes important. To permit flexibility and allow sufficient time for worth while accomplishment, the old five and ten-minute periods have been replaced by flexible long periods that allow time for planning, investigation and the completion of definite problems.

Perhaps no greater indictment can be charged against our educational structure as a whole than that of dooming many children to failure before they even enter the school by having set up standards of accomplishment for each grade, with but little consideration of the individual involved. Although health, home environment, maturation and mental capacity contribute to a child's difficulty in completing the school requirements, these factors have been given little or no consideration. The child either completed the set course in reading, writing and numbers or was retained in the grade.

How many men and women we have today among our unemployed and among our groups of so-called "social misfits" whose present plight in some way may be directly attributed to school failure is hard to judge. Considering the demoralizing effects of failure it seems probable that the number is large.

"No-Failure" Policy

Each child capable of attending a public school should be capable of success of some sort in that school. He may not accomplish what another does in a particular subject, but in permitting him to do what he can and in permitting him to pursue the particular interests he has, he will benefit much more than he possibly could if held to a rigid group standard. The "no-failure" policy implies an educational program that provides experiences suited to each individual child, rather than a program that makes all children lock step to a course designed for the attainment of rigid grade standards by the whole group. Growth is stimulated by adapting the program to each child's mental ability, particular interests and needs. He is assured success in his undertakings, an assurance necessary for his fullest development.

All beginning pupils, for example, are not expected to attain the same reading level before promotion. Some may not learn to read at all. All fifth grade pupils are not expected to complete the same amount of work in arithmetic for promotion, nor are all

pupils in a particular grade expected to know the identical subject matter in science. Each is, however, taught to utilize his time to the best advantage, to progress as far as his special ability permits in the mastery of the tool subjects during his elementary school life, to learn to adapt himself as an interested, cooperative individual to life about him, and to develop a variety of special interests both in or out of school.

The complete success of such a program means the abandonment of the destructive, competitive method of reporting school progress to the parent through the medium of percentage or numbers. Such a report was designed especially to hold the pupil to the lock-step standard of measurement.

The formal report card has been replaced by a new type of progress record, which enables the teacher to comment on each individual's progress. The report explains the child's individual problems, his strengths and weaknesses. Each child's record is a measure of his own accomplishment; it is based on what he is capable of doing and has done, not on what a class might be expected to do.

Significant in the aim to provide purposeful activity for the stimulation of child growth is the building of the social studies program around large units of work. Traditional subject matter to be learned from the single text and then to be recited to the teacher as "what the book said" has given way to rich experiences through units covering the intensive study of one problem at a time.

In outlining the social studies units to be developed in rural schools, an attempt has been made to set up situations that permit teachers to make the adaptation most nearly meeting their particular needs.

After experiencing the difficulties inherent in the provision for separate units for primary, intermediate and upper grade groups in a multigraded school, the present plan provides activities for combined primary and intermediate groups; and in some schools, when the teacher can make the adaptations, the development of a single unit for all grades is begun.

The following skeleton plan of the social studies program is available for the guidance of teachers in planning their programs.

In the primary and intermediate grades units of work on transportation, shelter, clothing, foods, occupations and amusements may be developed with particular emphasis on "Farm Life" in the primary group, and "How Other People Live" in the intermediate group.

The seventh and eighth grade outline of activities provides for units on American government and changing civilization in the modern world.

In many one-room rural schools the teacher will feel the need for combining all social studies groups under the heading of one unit, such as transportation, lumbering, Mexico or inventions. Such a procedure would provide suitable activities for primary, intermediate and upper grade children through the intensive study of one activity rather than the provision for two entirely unrelated activities. A single center of interest is generally coming to be accepted as the most desirable approach to the solution of the problem of many grades and numerous activities. Some teachers, however, have not sufficiently adapted themselves to the activity program to take this step completely at the present time.

Rural schools in this California county have done away with the following: the "vicious" grading system; the undemocratic report card; the daily program of five-minute recitations; the single textbook; compartmentalized subject matter, and fear of failure.

Although the general program provides a separate period for social studies and each of the tool subjects, integration is a factor of importance. It should be understood that in many schools integration is comparatively new. The transition from the old subject assignment and recitation to the large unit of work has been gradual. The integrative program is being developed as rapidly as each individual teacher can accomplish the orderly transition from the old, completely isolated subject matter procedure to the new learning situation where the development of a unit contributes to the whole educational process. The following illustration will best serve to show this difference in method.

Teacher A, in a unit of work centering around Mexico, skillfully provides rich experiences that contribute to history, geography, science, reading, oral and written expression, music, art, dramatics and health. The social studies program forms the core of the curriculum. Although the daily schedule provides a period for language arts, this period may be taken for the dramatization of a scene representing a Mexican market place, or it may be used for writing stories of what transpired in the social studies period when the group made plans for their study of Mexico. Likewise, the reading period may be used entirely for reading related to the integrated unit of learning.

Teacher B, less versatile and less confident, has confined her social studies unit on transportation to the ninety minutes allotted. She pursues the reading program much as formerly, with specific assignments from silent reading materials to reading groups. Occasionally she may use this period for reading related to transportation. The language arts period is generally confined to language exercises unrelated to the unit, to individual word lists for spelling and individualized instruction in writing. Experiences related to reading, writing and language, do come, however, in the regular social studies period, and at times in these other periods but less frequently than with Teacher A.

It is recognized that grade placement has little to do with ability to achieve in the tool subjects. Not only do the members of a class often vary two or three grades or more in subjects such as reading, arithmetic or spelling, but individuals themselves show differences among such abilities.

In recognition of these variations, individual instruction in reading, arithmetic, spelling and writing has entirely replaced class teaching.

Test Scoring by Machine

By BEN D. WOOD

ONE of the important obstructions to the extensive systematic use of objective tests for guidance and instructional purposes has been the excessive cost and inaccuracy of manual scoring. That the importance of this obstruction has been widely recognized is attested by the fact that many leaders in the testing movement during the last decade have expended much time, energy and ingenuity in developing devices to reduce the cost, inconveniences and errors of scoring objective tests.

While credit for the production of the machine described here belongs to the International Business Machines Corporation, many educational institutions and individuals gave assistance in a variety of ways. Among the institutions that gave such assistance the following deserve special mention: the Carnegie Foundation for the Advancement of Teaching, the General Education Board, Columbia University, the Educational Records Bureau, and the Cooperative Test Service of the American Council on Education.

The individuals who helped in various ways are too numerous to be listed in this brief article, but the following deserve special mention: Dr. W. S. Learned of the Carnegie Foundation; Dr. Herbert E. Hawkes,

Above we see two photographs of the international test scoring machine in operation in Providence, R. I. In the larger view, the inventor, R. B. Johnson (left) explains the scoring key to Dr. Ben D. Wood of Columbia University and Dr. Richard D. Allen, associate superintendent in Providence, who tried it out.

dean of Columbia College; Eleanor Perry Wood, associate director of the Educational Records Bureau; Dr. Richard D. Allen, Providence public schools; Dr. R. W. Tyler, Ohio State University, and Dean J. B. Pegram, Columbia University.

How Machine Operates

In taking tests that are to be scored by the machine, pupils write their names and all answers to the test questions on an 8½ by 11 or 9¼ by 11-inch international answer sheet, which is inexpensively preprinted to fit each test, whether five-choice, four-choice or true-false (two-choice). The standard answer sheet has a maximum capacity on each side of 150 five-choice and 375 two-choice (true-false) questions. Only the answer sheets are used in scoring — the test booklets can be used over and over again so long as they are handled with normal care. Little time is required for the pupil to record his answers on the answer sheet. Once he decides which choice is the correct answer, he merely makes a heavy short vertical line in the numbered space corresponding to the number of his chosen answer as printed in the test booklet.

The functioning of the international test scoring machine depends on the fact that a soft lead pencil mark is electrically conductive. The accuracy of the machine is due to the ingenious yet simple way in which the amount of current flowing through each pencil mark is controlled and kept to a uniform unit whether the mark is heavy or relatively light. The speed of the machine is due to the fact that it scores all items in a test simultaneously — a test of 150 questions is scored in the same time as a test of 50, or 20 or 5 questions. So far as sensing, distinguishing and summating the right and wrong answers are concerned, the machine operates with the speed of electricity. The speed of the machine in practice is limited only by the speed with which the operator can insert the answer sheets and read the score on the ammeter.

The machine distinguishes between right and wrong answers infallibly by means of a pencil-punched master answer sheet which automatically divides the contact units into two groups, the rights and the wrongs. From this division two meter circuits result — one carrying the aggregate of units of current from the correct responses, and the other carrying the aggregate of the units of current from the wrong responses.

If the machine has been set to score in terms of the number right, the current from the rights circuit is routed through a large milliammeter. This meter is calibrated directly in terms of the unit of current flowing through each small circuit, and hence the reading on the meter is equal to the number of right responses on the answer sheet being pressed against the contact plate. The score indicated on the meter is recorded by the operator on the exposed margin of the answer sheet, or the operator can call the score to a recording clerk at an adjacent table, or both.

If a test of 77 items is scored in terms of percentage, the voltage is stepped up so that a score of 77 is indicated on the meter as a score of 100. This is equivalent to multiplying each score by 1.298.

The machine has three sets of controls and this makes it possible to score with one insertion of the answer sheet three tests or three different parts of one test. Each test can be scored by any formula in terms of rights and wrongs. If the tests are to be scored in terms of the rights only, six part-scores can be secured with one insertion of the answer sheet.

Performance Exceeds Fond Hopes

Twenty-two machines are now in operation, and another 50 or 100 will be available before the end of the year. The first machine became available in February, 1936, and was immediately subjected to extensive tests by Dr. John C. Flanagan of the American Council on Education. His findings are summarized as follows:

1. The machine's scoring was 13 times as fast as the trained clerks' scoring of the same tests.

2. Out of 1,230 scores, the scoring machine had 135 errors of 1 point, and 2 errors greater than 1 point. The clerks' scoring had 155 errors of 1 point and 96 errors greater than 1 point.

3. Of the 135 errors of 1 point in the machine scoring, all but 17 were actually less than 1 point from the mathematically correct score, including fractions. All the tests involved in this trial of the machine required one of these scoring formulas:

$$S = R - \frac{W}{4} \quad \text{or} \quad S = R - \frac{W}{3}$$

4. The reduction of reliability coefficient of the test owing to scoring errors was .003 with the machine scoring, and .015 with the clerical scoring.

5. The machine was found to be readily adaptable to rescoring tests in terms of selected items, such as "odds" only or "evens" only.

The machine was then given a more crucial test by using it to score more than 24,000 tests given to 450 teacher candidates, 500 candidates for entrance to Rhode Island College of Education, and 15,000 pupils in junior and senior high schools in Providence. The machine scored these tests with greater accuracy than that secured from completely checked hand-scoring, and with an average speed of about 500 scores for each hour of operation.

On Location in New York

The machine was then lent to the New York Regents Inquiry, and during a period of about six weeks it scored more than 400,000 tests at an estimated saving of $15,000. A total of 3,951 tests scored by the machine were carefully checked. Of this number, 108 tests were erroneously scored by the machine. Of these, 82 were errors of one score point, and 12 of two score points. Only one error was as great as ten points. This error was due to misreading the position of the needle on the ammeter.

In this testing program the machine operated an average of thirteen hours per day for a total of 39½ days, and produced an average of more than 900 part and total scores for each hour of operation, or approximately one score for each four seconds of operation.

Late in 1936 the machine was lent for use in the Connecticut state high school testing program. Within a few weeks the machine scored about 100,000 tests. An interesting feature of the Connecticut program is that more than 20,000 pupils were tested with only 5,000 copies of the test booklets, each test booklet having been used to test four or more pupils.

Not the least remarkable feature of the international scoring machine is its low cost. The annual rental for the scoring machine will probably not exceed $300. At this figure, the machine can save enough clerk hours in one week to pay its rental for a whole year.

A special unit for scoring tests with variable item-weightings (such as the Strong Interest Test) will soon be available at an additional annual rental of $50. Other units for special purposes, including item-analysis, are being designed and will be available in a year or two.

The administration of tests with separate answer sheets for machine scoring is simple, but requires careful attention to one or two details. The most important of these is the provision of pencils equipped with soft leads of high graphite content. A second indispensable point is that the examiner must see to it that the examinees make their marks on the answer sheets very heavy and black. The machine will not give maximum accuracy if the examinees use hard lead pencils or if they make very light marks.

The best results have been obtained by using mechanical pencils equipped with "P3B" leads. These pencils thus equipped cost 7 cents each by the gross, a negligible initial outlay in view of the savings effected by the scoring machine. The mechanical pencils avoid the burden of sharpening pencils, will remain serviceable for years, and can be refilled with 4-inch "P3B" leads at about 1 cent each. A large supply of mechanical pencils with "P3B" leads should become a standard part of the equipment of each school that takes advantage of the scoring machine.

It is confidently predicted that the international scoring machine will make a highly significant if not revolutionary contribution to the research and guidance uses of objective tests.

Unified Course of Social Studies

By RAYMOND C. BURDICK

TODAY three types of organization are used in connection with the social studies program, and these may be classified as follows:

1. Separate subject courses in geography, history, civics, economics and sociology.

2. General social science courses with the materials from the different fields organized in a definite relationship to the social studies as a whole.

3. An integrated curriculum in which the social studies are organized with or without the preservation of their identity in a definite relationship to the entire curriculum.

While type three is gaining headway in many localities, our discussion is concerned mainly with the relative merits of the first and second types.

The prevailing practice in the past was to teach history, geography and civics as separate subjects. In many cases they are still administered in this manner. The main difficulty with this procedure is that, owing to revisions that have taken place in the past few years in which the scope of each has been broadened, considerable overlapping of materials has resulted.

Duplication is not necessarily inherent in this plan of organization. Much depends upon the manner in which the materials of the curriculum are developed. Lakewood, Ohio, seems to feel quite definite about maintaining the status quo but the schools there have developed parallel courses in history and geography in grades four to six.

While this seems a step forward, I have reached the conclusion that the unified plan of organization will do more to develop critical thinking and to aid the children in solving problems by first-hand information. At the same time, a more sympathetic understanding of other peoples can be gained and the children will learn more about society and the way to live harmoniously in it. In other words, the controlling influence in this organization of materials is a problem, issue or topic of social relationships.

The first change in the school curriculum that is needed is a change in the character of its content. Textbooks have not been developed in the past and teachers have been more or less confused in their thinking. Steps are now being taken to create materials to aid in this revision. The unified plan is to start with the present problem or current issue.

In our school system we have decided that a unified social studies curriculum should be developed on a basis of centers of interests. Consequently a committee was formed and a definite set of objectives was set up for the kindergarten and for grades one and two. Problems centering around the home and school life were considered to be the best approach in the kindergarten. In the first grade, the school and Huntington were the centers of interest; and in grade two Huntington and Long Island were topics for consideration. Units have been organized and gradually others are being added to the curriculum.

A second committee made a careful analysis of the various social studies curriculums and finally adopted the Ann Arbor course of study for grades three to six. This committee revised the course of study to include Long Island, New York City and New York State, but the problems are those that seem to stimulate a greater interest in history and geography without an undue loss of time and with better understanding of the development of man and his relations to the natural resources that surround him.

No unified program in social studies can ever be successful until our training institutions realize the problems and train teachers in social guidance. The seven cardinal objectives of education justify the unified program but we need more than justification; we need actual teacher training that includes a thorough understanding of peoples and a philosophy of social research.

Thus, my answer is that a unified plan of social studies is the best procedure for the elementary grades.

Informing the Public

About the New School Curriculum

By R. E. GARLIN

PUBLIC opinion is both the basis and the limitation of public education. This is a fundamental principle of school interpretation. Schools are owned and controlled by the public, not by the teachers and school officials; the latter are merely the servants of the public temporarily in charge of the schools.

If school officials and teachers ignore too much the wishes of the public with reference to school affairs, that public will sooner or later retire these servants, together with their plans, be these plans ever so sound. Yet, school people, because of their close contact with, and greater knowledge of, the schools, should assume leadership in order that the schools may progress steadily and consistently. This can mean only one thing, namely, that the public must be kept informed so that it may act wisely in giving its approval to proposed school plans and policies.

The principle of school interpretation enunciated above is often ignored by school people, or at least not taken seriously by them. Too often they have appealed to the public only when the schools were in trouble. Then they have become impatient because the public has not promptly rallied to their cry to save the schools.

Shun High Pressure Tactics

If instead of keeping the public fully and continuously informed, the school man resorts to occasional high-pressure efforts at interpretation, he can expect only to arouse suspicion, to have the public discount his claims and give only half-hearted support, or even opposition, to his program of school improvement.

This principle in regard to school improvements in general applies with equal force to present efforts to improve the curriculum. In their enthusiasm to effect needed revision, school people must not forget that their efforts are limited by public opinion. They must carry the public along with them. No matter how fine a curriculum is finally worked out, it must be accepted by the public before it can become operative.

Not only should the layman be informed in order to forestall opposition to the new curriculum, but the school should enlist his interest in offering suggestions for improving the schools. No citizen is so conservative that he cannot make a single suggestion for the improvement of the schools. But if he is to offer specific suggestions, he must be informed about the whole revision program.

Nine Points to Cover

What should the layman be told about the curriculum? The points to stress may depend somewhat upon the locality and the degree of information concerning the schools that the public already has.

Certain fundamental matters, however, bear stressing in the program of interpretation everywhere. Among these may be mentioned the following: (1) the need for progressive change in social institutions, particularly the school; (2) the change in the philosophy of education; (3) the psychology of learning as it applies to the new curriculum; (4) the place of education in social life; (5) the fact that education is not a function of the school alone; (6) the "fundamentals" *versus* the "fads and frills"; (7) the characteristics of the present program and the major aspects of proposed plans for improvement; (8) the new function of the teacher, and (9) new ideas in evaluating the results of instruction.

The whole program of curriculum development suggests change from what is to what is to be; otherwise there would be little excuse for undertaking revision. But the layman will find it difficult, because of custom and tradition, to accept change in any social agency. This makes it necessary, in the first place, for the schoolman to guide his thinking with respect to the need for changes in social institutions. The layman can usually appreciate changes in such matters as household equipment, farm implements, business equipment and means of transportation because he recognizes such changes as means to a more desirable end. He must likewise be shown that social institutions, the school included, are merely the means for realizing human purposes and values and that such means call for modification when they are no longer in full harmony with the changing needs of life and living. It seems to be characteristic of a people to set up institutions and then to regard those institutions as ends in themselves, when they are merely the means for realizing human needs and purposes.

First Step to Take

The first objective of the interpretation program, then, is to direct, in a general way, the layman's conception of the school as a means for realizing more fully the needs of life and to point out that this agency cannot remain static in a changing society.

It is important, in the next place, to emphasize the fact that the whole philosophy of education has undergone, and is undergoing, change. To the uninformed layman, the purpose of the school is usually a matter of teaching the three R's, or of teaching facts and subject matter. It must be made clear and convincing to him that a better conception of education is to regard it as a process of devel-

oping the child along the line of his abilities and interests and the activities of life. It must be shown that subject matter will not be neglected but that it will be used as a means in developing the child, just as the saw and the hammer are used as a means in the construction of a house. He must be led to see educational values in terms of character and behavior instead of in terms of subject matter. Not only must the layman be given a new conception of educational values, but he must also be led to understand that the values to be achieved determine the materials of instruction.

Highly important, also, is the need for explaining the psychology of learning governing the new curriculum. The layman is likely to be most familiar with the old idea of having the child absorb passively the facts and information as found in books or as given by the teacher. Very likely the school he attended put a premium upon absorbing lessons with a minimum amount of activity. In that school he got along best if he discarded all obvious signs of activity at the door as he entered. Those were the days when a child was to be seen but not heard.

Must Change With Times

The patron must be shown, in a concrete and convincing manner, that education is an active and not a passive process and that the child learns by doing. It must be made clear to him that education results from engaging in significant situations and not from passively absorbing information. He should also be led to see why the new curriculum places emphasis upon child interest and individual differences instead of using negative motivation and the same assignment for all, as formerly practiced.

The layman needs, furthermore, to develop an abiding appreciation of the place of education in society. He must be led to understand that all the arts of civilization have their basis in education and training. If it were not for conscious and progressive steps in developing and training the new generation, man would never have made the achievements he now enjoys and would never have risen above a primitive stage of civilization. If this truth is made evident, the school will receive more generous support and will be enabled to continue its progressive development.

In this connection, however, the public must be thoroughly oriented in the fact that education is not a function of the school alone, but that the home, the playground, the association of children together and many other agencies of society contribute to the total education of the child.

All Agencies Must Help

This fact will enable the public better to understand the contribution of the school. It will also enable the public to see that all agencies of education must cooperate and work toward the same end if the best results are to be achieved. Often the public spends much of its time criticizing the school and blaming it for all of the ills of society when, as a matter of fact, the school has never deliberately championed any of the shortcomings of society. This fact should, if generally made known, cause all educational agencies to cooperate more wholeheartedly in the development of the school program of work. This broader conception of education is especially desirable under the new curriculum under which the formal teaching program reaches far beyond the four walls of the classroom.

Another matter of tremendous importance is that the layman acquire the correct attitude toward the "fundamentals" and the "fads and frills" in education. There has probably never been an age in which the people were as proficient in the fundamental skills as the present, and yet all this proficiency did not prevent the social and economic ills with which the country is beset. The layman must be convinced that the fundamentals, correctly defined, consist of such matters as training in civic-social-moral values, in physical and mental health, in leisure and esthetic values and in economic efficiency; and that the achievement of these objectives calls for a much broader curriculum than the traditional tools of learning, important as these may be.

It is, moreover, essential that the layman understand the characteristics of the present school program and the major aspects of the proposed plans for improvement. The old program taught subjects in isolation and as ends in themselves. It followed a textbook procedure and sent the child to the book for information. The educational process seldom reached beyond the four walls of the classroom and remained isolated from life. The interest and initiative of the child were usually ignored.

Over against this picture, the layman must receive a description of the new program with its supporting arguments. Under new programs subjects are grouped, and subject lines become less distinct. The child makes greater use of concrete materials, and the school becomes a true workshop. Library facilities are increased, and books become interesting tools for learning. The school goes to life for interesting and significant units of work and uses more materials from the out-of-school life; education becomes more like outside life and living. And the interest, the initiative and the activity of the child are considered of paramount importance. To such aspects of the new program the layman's attention must be directed.

Understanding the New Teacher

The layman must also acquire a new conception of the teacher in the educational process. No longer should the teacher be regarded as a taskmaster who assigns difficult and meaningless lessons and then uses negative means of motivating study. No longer does the teacher teach in the old sense of forcing facts on the child with all the disagreeable methods he can devise. Instead the teacher provides a rich, interesting and significant environment, and then guides and stimulates the child in his learning activity.

Finally, the patron must be informed on the newer concepts of evaluating the results of instruction. He must be led to see that, while formerly evaluation concerned itself largely with the measurement of knowledge and skills, the tendency is, more and more, in the direction of measuring the educational product in terms of social returns. He must

(Continued on page 40)

Commercial Graduates on the Job

By ALPHA E. MYERS

THIS study was undertaken at the end of a busy school year in the commercial department of a high school with an enrollment of about 1,400. During the years of the depression classes in shorthand and typing have been overcrowded. Many enter these, thinking they will be able to get positions upon graduation. A large number always drop out before the senior year, since many have no aptitude for the work. The group is somewhat selective in the senior year since only those who have been able to do at least average work during the junior year are permitted to take the senior work.

I recently undertook to follow up all the girls and boys who had graduated from our two-year stenographic course for a five-year (1931-35) period. We wanted to know what they were doing and what their opinions were concerning the course offered.

More Helpful to Girls

The list of graduates contained the names of 215, an average of 43 each year, 82 per cent of whom were girls and only 18 per cent boys. The study is based upon the return of 52 per cent of the questionnaires mailed.

As this group was selected from the stenographic course, four semesters each of shorthand and typing had been required. Commercial arithmetic and bookkeeping were offered two semesters each. Commercial law and commercial geography have always been one-semester subjects. Business training was introduced in the fall of 1931 and was a two-semester course until the fall of 1935.

The commercial course is more helpful to girls than to boys in obtaining positions, from 69 to 92 per cent believing it was helpful, while the range for the boys was from 0 to 75 per cent. Probably this is because more girls go into clerical and stenographic work. Most of the graduates reported that their training in shorthand and typing enabled them to try out for temporary positions, which later led to permanent ones, even though they were not of a stenographic nature.

Our graduates are often found at work other than that for which they have received some training in high school, and the returns indicated that 30 per cent are working outside of the commercial field.

Typing Rated First

Since so much time is given to shorthand and typing to the exclusion of other subjects that might prove more useful and more valuable to the majority, the reaction of the group to the value of subjects on which they had spent a major part of their time in high school was requested. Both seem to be considered of value, particularly typing, which is rated first by 92 per cent, and shorthand second by 70 per cent.

The many changes experienced by all of us in our economic and social life during the years 1931 through 1935 are reflected in the chronological history of this group of young people. About 84 per cent of the entire group reported that they had held positions of some kind, but many were for short periods of time only and for a varied sort of work. There were 18 per cent of the girls and 25 per cent of the boys who had attended business college. This attendance varied from one to nine months.

Ten per cent of the girls and 25 per cent of the boys had attended college, which indicates that few of our commercial graduates go to college. Most of the girls who went to college did stenographic work in return for tuition. One boy in college, in addition to stenographic work there, was holding a position as pastor in a small community. Several worked in relief headquarters and in offices connected with government projects.

The girls who had done some stenographic work since leaving school numbered 36 per cent, the boys, 17 per cent; clerical work: girls, 39 per cent, boys 38 per cent; selling: girls, 16 per cent, boys, 13 per cent.

The following table shows the activities of the group in May, 1936.

Government Pay Highest

The salaries paid by the government in general averaged higher than those by private concerns. This may account for the somewhat higher average than actually exists in our community. The girl who became a teacher was receiving $125 a month.

ACTIVITIES OF GRADUATES FROM TWO-YEAR STENOGRAPHIC COURSE FOR FIVE-YEAR PERIOD

Girls		*Boys*	
Stenographic	22	Stenographic	3
Clerical	15	Clerical	7
Selling	4	Selling	2
Bookkeeping	2	Bookkeeping	1
Telephone exchange	3	College	4
College	5	Printing	1
Business college	1	Adv. and Display	1
Library	1	Radio entertainer (part time)	1
Teaching	1	Service man (typewriter company)	1
Nurse's training	1	Ice cream maker	1
Elevator operator	1		22
	56		
Unemployed	26	Unemployed	2
	82		24

The boy receiving the highest salary was working for the state at $135 a month. The girl with the highest salary was in civil service, with a salary of $120 a month. The third high in the salary scale of both boys and girls was not doing stenographic or clerical work. He was with a large dairy and classified as an ice cream maker at $1,248 a year.

All salaries were not reported, but those reported by the girls ranged from $10 to $25 per week. When given on the basis of a monthly payment, they ranged from $57 to $125 a month. The average for the girls was about $70 a month. Salaries for the boys were slightly higher. Reported on the basis of a weekly payment, they were from $10 to $20 a week, and on the monthly basis, from $50 to $135. The boys' average was about $75 a month. The girl operating an elevator was receiving the same salary as most of the girls who were doing stenographic work—$70 a month. Six of the girls were married, three of whom were working and three apparently seeking no employment. The graduates during the years 1934 and 1935 made up 72 per cent of those unemployed.

There are no statistical data concerning the ratio between the supply of stenographers coming from our high schools, business colleges and college-trained stenographers from our two universities, and the number of positions that are available in our community. But all indications are that there is a great increase in the number taking stenography and a corresponding decrease in the number of available positions, together with a decrease in turnover. No doubt we are permitting far too many girls and boys to enter our shorthand and typing classes.

Approximately 50 per cent of the high school pupils are enrolling in the commercial department. Not many stenographic positions are available in our community, and it was found that those who had an aptitude for the work and who were capable of doing it acquired the skill necessary in three semesters.

In an effort to substitute a subject that would more nearly meet the needs of all who are entitled to consideration and to give something beyond the clerical subjects, a semester of business economic problems, or social economics, was introduced. An attempt is being made in that to give the girls and boys a wider and more intelligent outlook on community life. A more general type of business education is included to get away from the idea of educating merely for the routine of the office and the initial job. Not only are the jobs few, but there is little opportunity in them for advancement in the future.

Informing the Public

(Continued from page 38)

be shown that knowledge and skills are important and must be evaluated, but he must also be led to appreciate that measurement must go further and test attitudes as manifested in human conduct, for one's conduct patterns are, after all, the most important results of learning and training.

By what methods is such information to be carried to the layman? Perhaps one of the best methods is to invite him to participate in the curriculum revision program. Editors, civic leaders and other intelligent laymen should be sought out for this purpose. Such participation could be initiated through questionnaires, conferences and individual interviews.

Committees of selected laymen might be appointed at such conferences to report later to their professional committee on any suggestions they may have to offer. Such committees might also be used for studying the tentative proposals of the professional committee and reporting their suggestions.

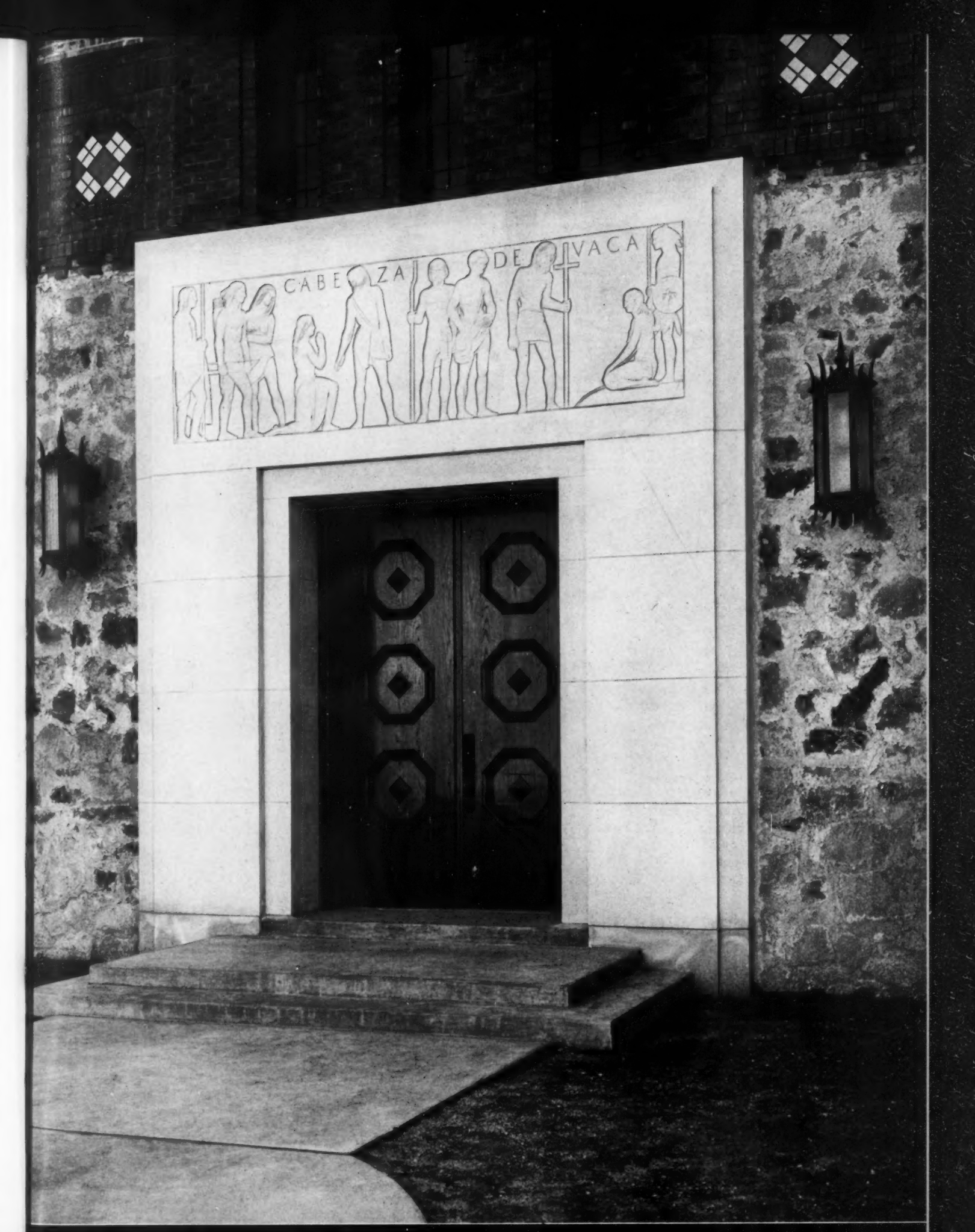
A number of other methods are available for reaching the public. The public press is usually generous in carrying information about the school. Parent-teacher association meetings —local, district and state—are an excellent means of reaching an influential group of school patrons. Pamphlets, bulletins and letters may be used to reach the leading citizenship. At times curriculum bulletins have been issued by the parent-teacher organization, thus saving expense to the public. The school paper is available for articles on the new curriculum proposals. Civic clubs often include the schools in their programs; through such organizations the leading laymen can be reached. Extension classes on the curriculum, conducted for teachers, could be thrown open to interested laymen, and, finally, the curriculum proposals could be carried to the public through a series of radio programs.

Such organized efforts to inform the public about the new curriculum should have certain beneficial results. In the first place, full and complete publicity will prevent much direct opposition when the curriculum is finished and will provide a nucleus of support when the curriculum is to be installed and made effective. Under such a plan of interpretation the number of adverse criticisms at the end should be reduced to a minimum because the public is stimulated to offer criticisms as the work progresses and is given opportunity to translate such criticisms into constructive suggestions.

In the second place, a program of curriculum interpretation will enable the school forces to assume less of a defensive attitude in the work of revision; curriculum revision becomes a cooperative process in which laymen as well as teachers share.

In the third place, interest stimulated in the curriculum may easily be extended to other school matters, the public thus becoming a more constructive force in school development in general.

Finally, adequate interpretation gives the public a basis for judging the new curriculum. In this connection, it may be reiterated that the curriculum must finally be accepted by the public and that this acceptance rests upon understanding and appreciation of the new program as compared with work given in the old.



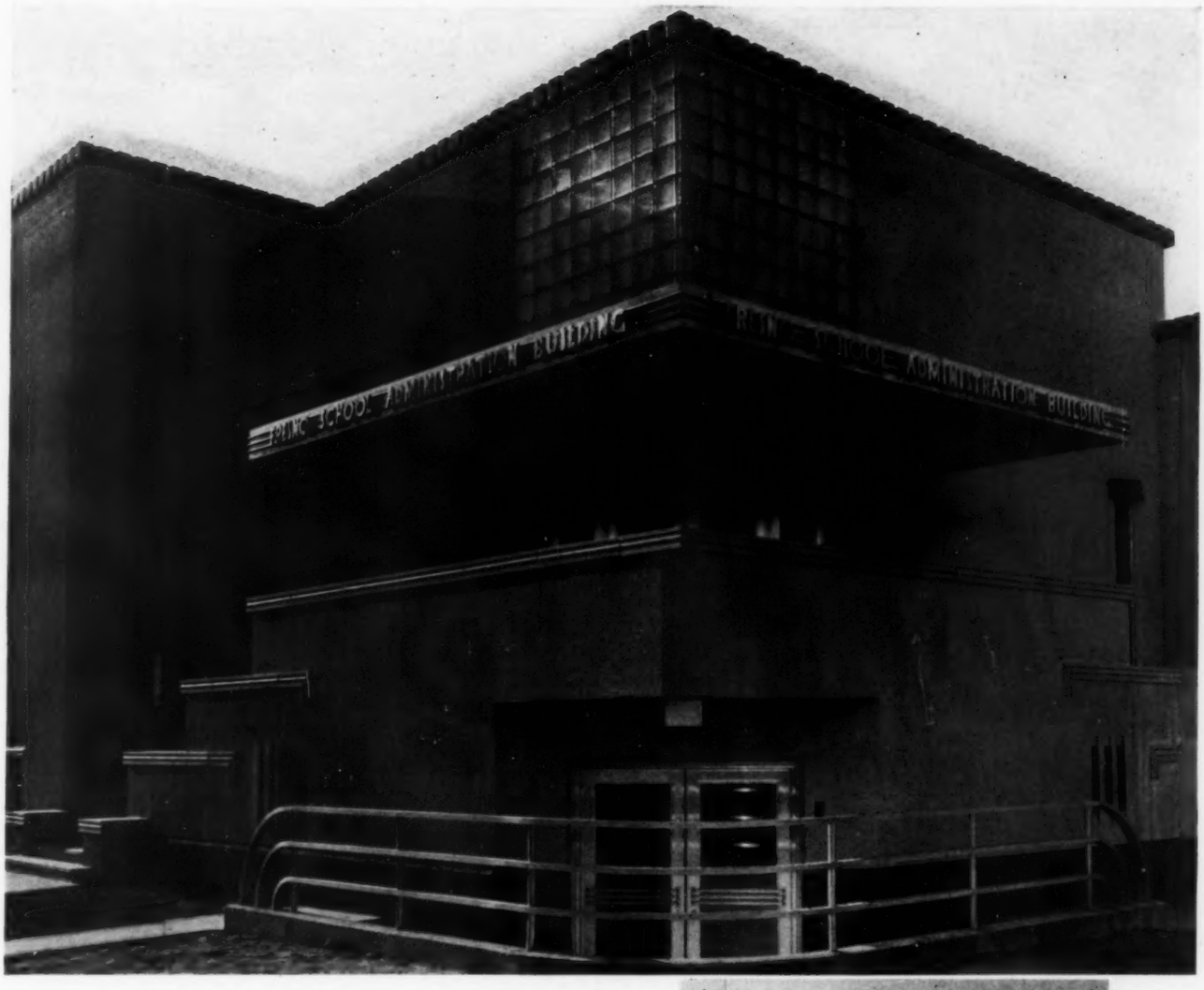
THE SCHOOL PLANT

Structure Spurs Community Spirit

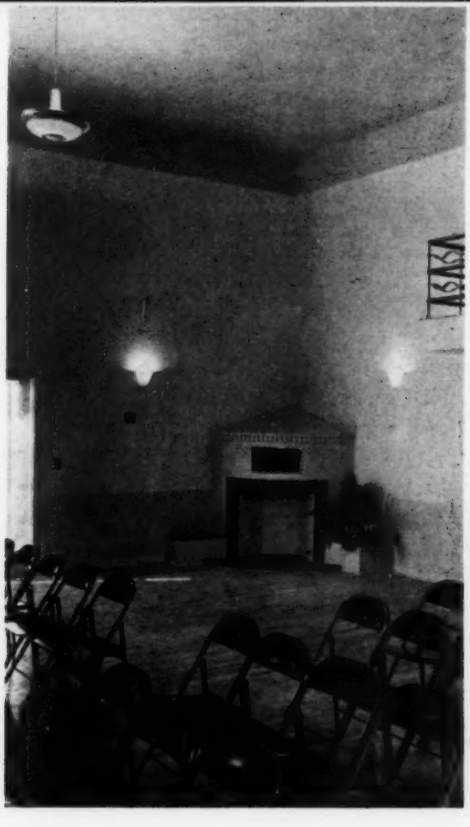
By O. S. HUBBARD

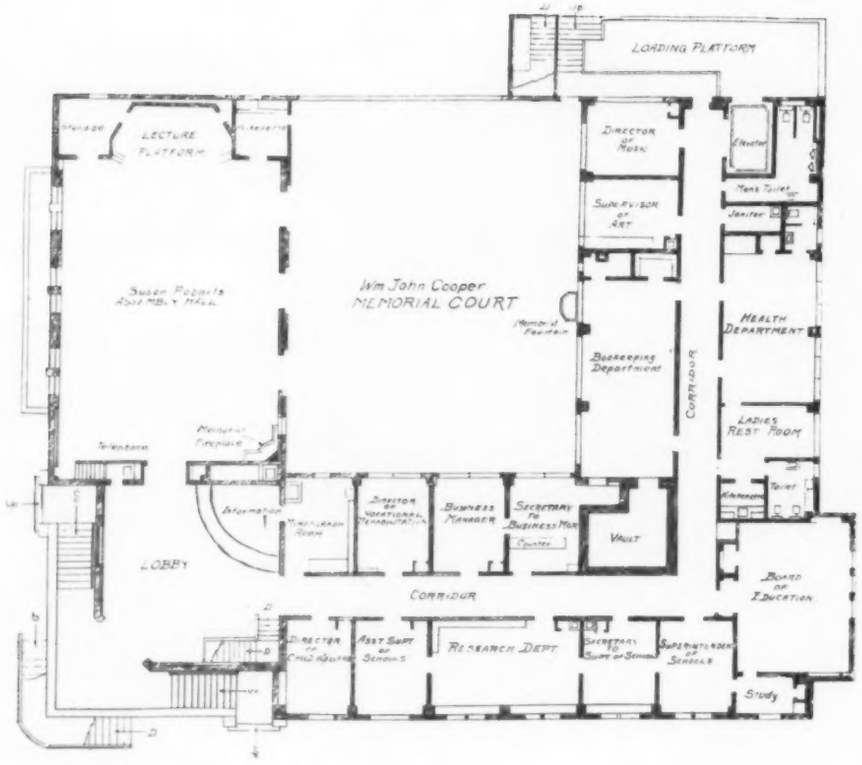
ON Jan. 17, 1937, in Fresno, Calif., occurred the formal dedication of the city's new school administration building. Each step in the erection of this modern service unit from the breaking of ground on April 13, 1936, to the final ceremonies was utilized as a means of enlisting public interest in the school system. The project is distinguished, therefore, aside from its many unique features, as a successful venture in public relations.

The Fresno city school district got a "lucky break" when it sold the site



Front entrance (above) and two interior views of the Fresno School Administration Building. Business offices have acoustical ceilings and directional lighting. At the right is one corner of Susan Roberts Hall.





Plans of the basement (below) and main floor (above). The William John Cooper Memorial Court is a feature of the building, planned as a nucleus for the Fresno Civic Center. Charles H. Franklin is the architect.

of the old administration building to the municipality for the sum of $80,000. The municipality had received a federal grant toward a new municipal auditorium, and the site of the administration building, being centrally located and covering an entire city block, seemed ideal for the purpose.

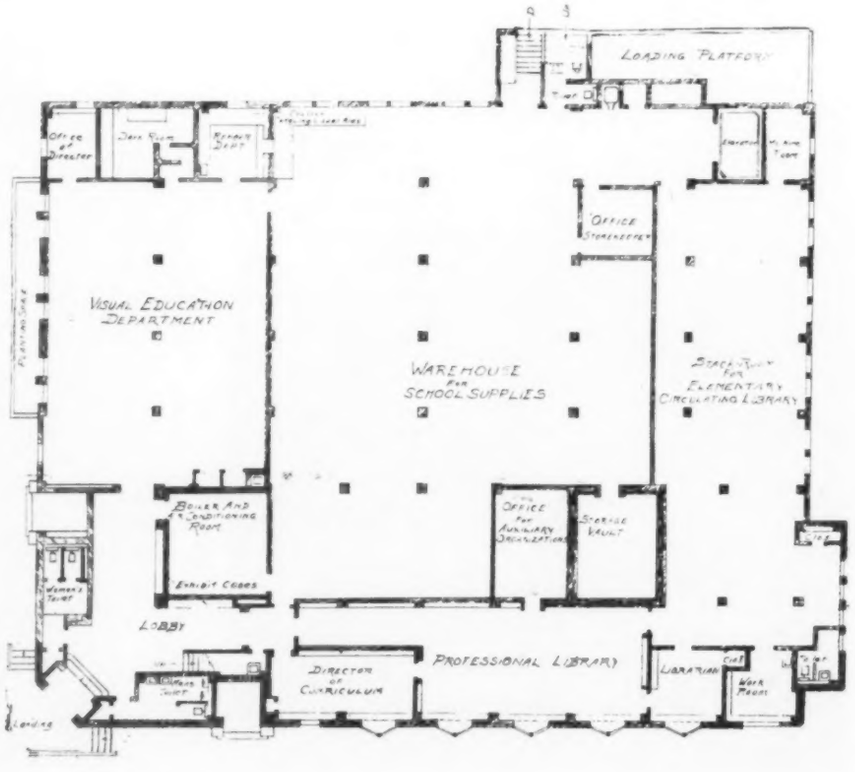
The board of education and administrative offices were moved temporarily into a downtown office building. Meantime an application was made to the Public Works Administration for a grant in the amount of $56,454, representing 45 per cent of the contemplated cost of the new building. The grant was made. The board of education first purchased for $11,000 a new site one block from the courthouse in the heart of what it is hoped will develop into the Fresno Civic Center.

After the plans had been accepted and contracts awarded, ground was formally broken at ceremonies on April 13, 1936, with the members of the board of education and a number of prominent citizens participating.

The cornerstone for the new building was laid on November 10 as a part of the observance of National Education Week. Fresno Post No. 4, American Legion, was invited to take charge of the program. The local commander invited Thomas J. Riordan, commander of the American Legion Department of California, to lay the cornerstone and to deliver the main address of the occasion. Many citizens representing such organizations as the county board of supervisors, the city commission, parent-teacher association leaders, the chamber of commerce, and labor, were given places of honor at the ceremonies. Several hundred citizens were present.

The cornerstone box contained copies of all local papers and contributions from more than 100 civic, patriotic, fraternal, professional, labor, welfare and educational organizations. Each school in the city prepared a statement covering its history and enrollment and sent a representative to the exercises. At the proper time the representatives of the thirty schools, from the smallest elementary school to the adult school, filed by in procession and deposited the material in the cornerstone box.

On the occasion of the formal dedication the size of the auditorium — it seats about 250 — made it necessary to make the services invitational. Only heads of organizations and key people in the life of the city were invited. Dean William Wade Kemp of the school of education, University of California, was the guest speaker.



In addition to dedicating the building to Horace Mann, Dean Kemp dedicated the memorial fountain and court to William John Cooper, former superintendent of Fresno city schools, later state superintendent of public instruction, and U. S. commissioner of education. He also dedicated the board of education room to the citizens of Fresno who formerly have served as members of the board of education. The bronze tablet to the left of the entrance to the board room bears the following statement, which was written for the occasion by Dr. Ellwood P. Cubberley, formerly dean at Stanford:

"The service rendered by a broad-minded and progressive school board, free from political, denominational and fraternal influence, a school board that works with the higher welfare of the schools under its control constantly in mind, and one that extends to its executive officers the confidence and intelligent sympathy that bring out the best in each of them, is a community service the importance of which is hard to overestimate. To few men or women in any community comes the opportunity for finer or more enduring service."

In this room are hung the photographs of all the citizens who have served as president of the Fresno city board of education.

The Fresno City Council of Parents and Teachers conceived the idea of dedicating the court and fountain to Mr. Cooper. This organization financed the construction of the fountain. A bronze tablet set in the front of the fountain bears the following inscription: "Dedicated to Wm. John Cooper, a Friend of Children, by the Fresno City Council of Parents and Teachers."

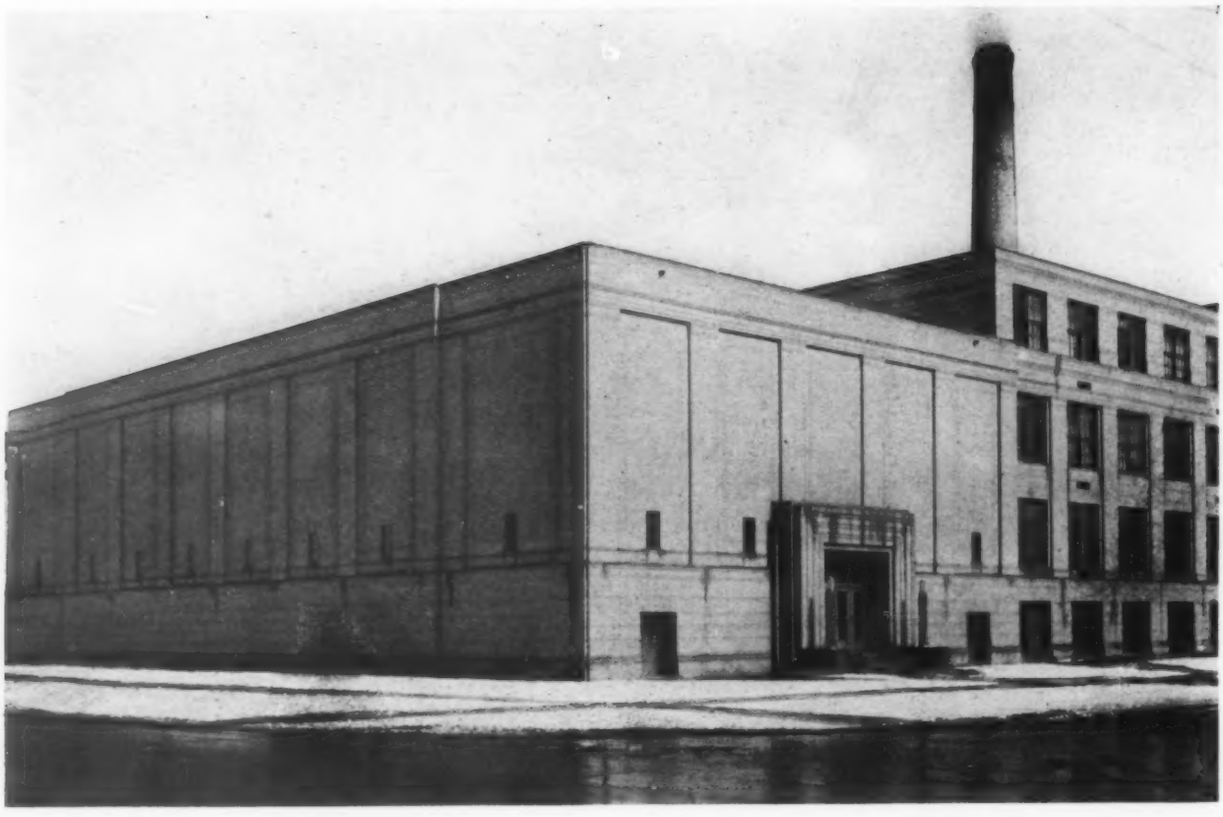
Visual education department, looking toward the rear.

The Fresno City Council of Education, embracing all the teachers, principals and supervisors of the city, asked for the privilege of dedicating the auditorium to Susan Roberts, a beloved teacher in the Fresno City Schools from 1886 to 1919. This group financed the installation of a memorial fireplace in one corner of the auditorium, on the front of which is a bronze tablet bearing the simple statement: "Dedicated to Susan Roberts, a Wonderful Teacher." The council was represented in the dedication services by Dr. Charles L. McLane, who was superintendent of schools during a considerable part of Mrs. Roberts' tenure as a teacher.

Following the formal services of dedication the board of education and the administrative staff were "at home" to the public. Between the hours of 4:00 and 6:00 p.m. approximately 2,000 Fresno citizens visited the new building. Each one was given a directory setting forth the locations of the various offices and departments and giving the names of the employees. An electric organ and an organist were furnished through the courtesy of a local business establishment. The organ was placed in the building lobby.

The visitors were received and escorted through the building to the strains of appropriate music. The principals, vice principals, deans and counselors in the various city schools assisted the members of the administrative staff in receiving and showing the visitors through the building.

Storeroom, showing metal bins for assembling supplies, and shelving.



Auditorium at Grand Forks

By ELROY H. SCHROEDER

THE auditorium section of the Central High School, Grand Forks, N. D., is the third and final unit of the building. The first, a classroom section, was constructed in 1917; the second, additional classrooms and a gymnasium, was added in 1936; and the third, a section with additional classrooms and an auditorium and recreation room, completes the block, giving the central building sixty-two rooms, including the gymnasium, auditorium, shops, laboratories and classrooms. The entire building is of fireproof construction throughout.

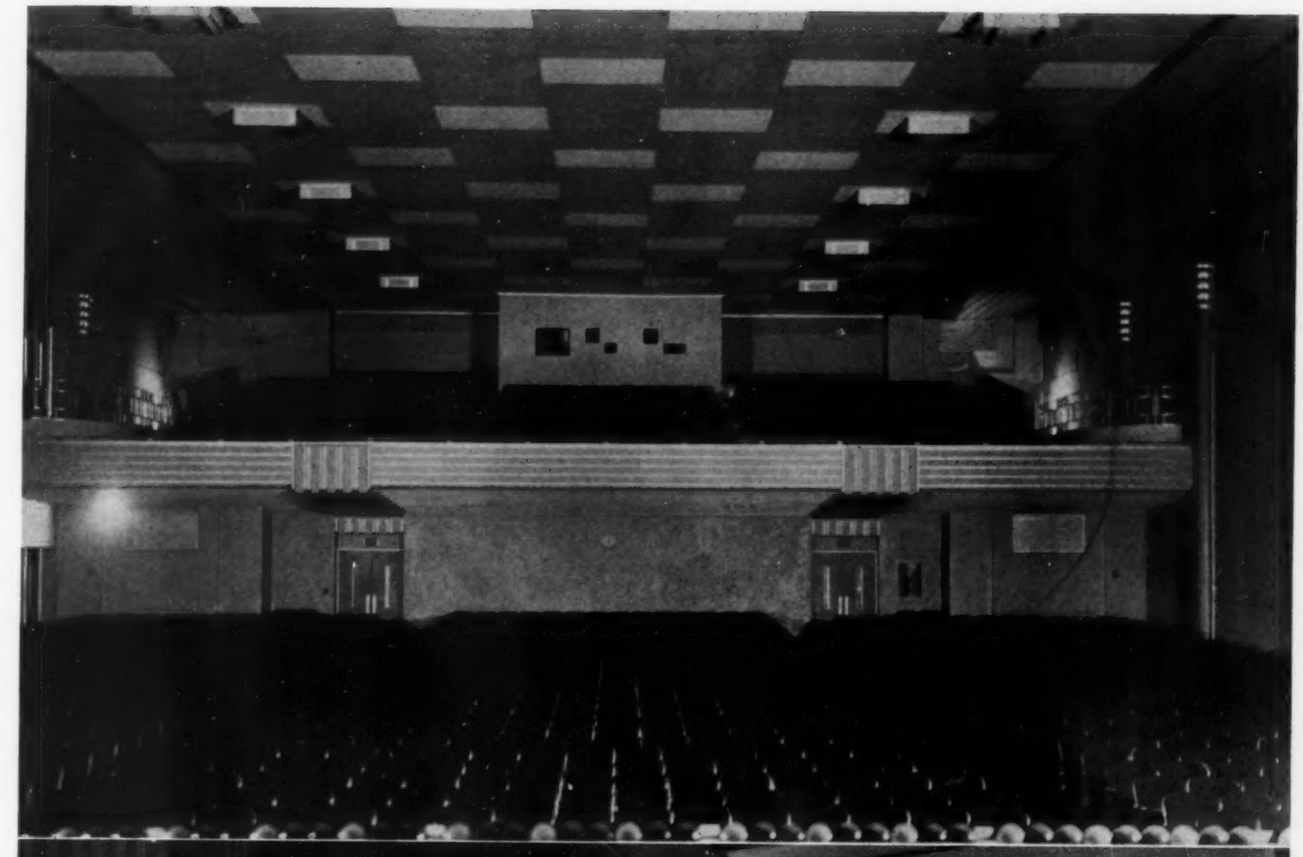
The final unit is a building of steel frame construction, steel joists, brick and tile walls, and reenforced concrete floors and roof slab. The girders over the auditorium have a span of 80 feet and weigh approximately 5½ tons each.

The auditorium itself has a capacity of 1,516 people—1,111 on the main floor and 405 in the balcony—and is amply equipped for all occasions. No windows connect it with the outside. Artificial lighting is used entirely.

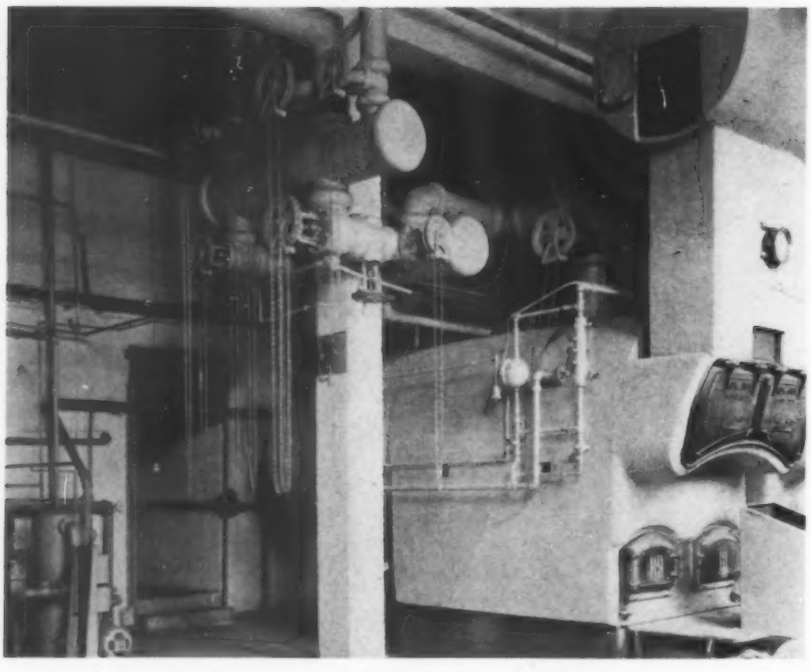
This plan was adopted for several reasons. First: two United States highways pass the auditorium on the long side. Noise would be an important factor to consider in the construction of such a unit. Second: as has been previously mentioned the long winters make it necessary to conserve as much heat as possible. Windows are always a source of heat wastage. Third: North Dakota has a light soil which drifts easily because of the level land. Dust is always a problem. That was controlled by eliminating windows.

The proscenium arch of the stage is 40 feet wide and the stage itself is 32 feet deep. The stage has been equipped in such a way that it can be heated without heating the rest of the auditorium. This is an important item in North Dakota where the length and severity of the winters make heating a real problem. Grilles at

Three views on this and the opposite page of the high school auditorium at Grand Forks. It seats 1,516. The lobby (below, right) has beaded and gilded pilasters. A rubber tile floor, in blue, gray and black, sets off the rose and gold paneled walls.



In addition to classrooms, there is a printing shop.



Two boilers are available, one for emergency use.

both sides of the proscenium arch admit heat from heat units. There are the necessary borders, drops, flood lights and a fine switchboard with which to operate the lights.

Facing the stage on the right is a room for equipment, stage scenery and fireplaces. On the left, a pipe organ has been installed. The console of the organ is in the pit and the tones are admitted to the auditorium both through a grille at the side of the proscenium opening and by two large doors entering the stage proper. A projection booth at the back of the auditorium is large enough to carry all necessary equipment, such as two motion picture projectors of standard size, spotlights and stereopticons.

Directly below the stage are six large sized dressing rooms. The dressing rooms are used during each school day as private practice rooms for music and dramatics. The vocal music room has a terraced floor. Arm chairs are used, grouped by fours.

The largest of the dressing rooms is equipped with radio paraphernalia so that school broadcasts (which are given three times a week over the local station) can be conducted in the room when small groups are used. The stage is also equipped for broadcasting so that larger groups can broadcast from the stage proper.

Under the main auditorium is the music and recreation room. All large instrumental ensembles use this room for rehearsals. The construction is all concrete, with sound-insulated ceiling.

The front entrance to the main auditorium has aluminum doors and frames. The walls are blue, paneled with aluminum strips; the ceiling is recessed, paneled and finished in gold. The ticket window on the right side has an aluminum sash and frame.

The double doors leading to the main auditorium are covered with leather—red on the auditorium side and blue on the lobby side. Those leading to the stairway and lower auditorium are finished in blue.

A public telephone booth and men's and women's lavatories near the entrance in the lobby complete the equipment for the auditorium. Leading from the auditorium and from the balcony and recreation room, as well, are three doors to take care of pupils who pass to and from the auditorium proper.

The classroom section of the auditorium unit consists of thirteen large classrooms, each with acoustically treated ceilings and 3/8-inch inlaid linoleum floor coverings. In addition to the classrooms, one general shop for wood and metal work, one mechanical drawing shop (to which light is admitted from both sides and ceiling), and a general printing shop complete the instruction section.

The boiler room is equipped with two boilers—one to carry the regular load and the other for emergencies, both equipped with stokers—a low pressure heating system, switchboards, a coal bin that will hold approximately seven carloads of coal, toilet and restroom facilities for the janitors, and a paper pit.

Hallways throughout the building are unusually wide, with sound-insulated ceilings, terrazzo floors and all available space used for built-in lockers. The addition of a freight elevator was considered necessary.

Minnesota Goes "Audio-Visual"

By HAROLD C. BAUER

AUDIO-VISUAL aids to education have been knocking insistently on schoolhouse doors. Stringent curtailment of finances in most school districts and municipalities has compelled many educators to turn a deaf ear to the appeal of effective aids to learning. The clearing of financial skies, however, presages an immediate and enthusiastic reception and installation of a comprehensive audio-visual program in progressive schools.

An indication of the rapidly changing state of public mind and finance was the recent decision of the Minnesota State School Board Association to include a discussion of the audio-visual program and its effectiveness at the general assembly of its annual convention. Officers of that association felt that the time for information relative to audio-visual teaching aids, with a view toward stimulating their installation in Minnesota schools, had arrived.

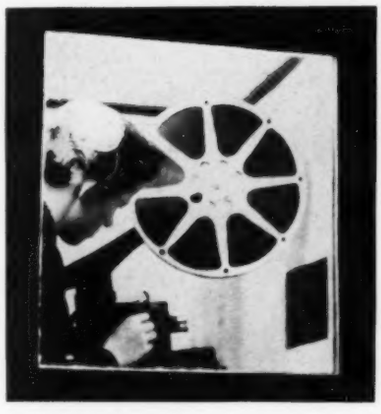
A study was prepared which would present the case with greater emphasis on audio-visual aids to education, as well as evaluate such programs through a compilation of opinions representing the viewpoints of Minnesota school administrators. Certain points of view, particularly those pertinent to trends in equipment, as shown through the replies of 220 administrators, are significant.

Majority Needs Equipment

Twenty-four per cent of the 220 schools studied had some type of motion picture equipment; 19 per cent, 16 mm. silent equipment; 6 per cent, 16 mm. sound equipment; 13 per cent, 35 mm. silent equipment, and 1 per cent, 35 mm. sound equipment.

Sixty-three per cent of the school administrators, not including the 24 per cent, expressed intention to install some type of motion picture equipment as soon as the finances of the particular district permitted. Thirty-seven of them desired 16 mm. sound equipment; 19 per cent, 16 mm. silent equipment; 6 per cent, 35 mm. sound equipment and only 1 per cent, 35 mm. silent equipment.

This response clearly indicated that Minnesota administrators are planning to increase use of motion picture equipment as a teaching aid. A positive preference for the 16 mm. type of sound projector was expressed. When 16 mm. silent equipment was specified



a statement was frequently appended to the effect that a silent projector was preferred because of the limited number of sound teaching films available at nearly all rental sources.

The fact that nearly all administrators specifying 16 mm. silent projectors as equipment to be purchased stated they would use 16 mm. sound equipment entirely as soon as a larger supply of good sound films were available at more reasonable rental and purchase rates, places 16 mm. sound equipment in a class by itself as the leader in the present audio-visual field. Administrators felt that, while 16 mm. sound projectors could satisfactorily show both silent and sound films, the price range between the two types of equipment was too great to offset the advantage of using occasional sound films. In this same connection, the simplicity of operation for the average classroom teacher of silent 16 mm. equipment, as compared to the average 16 mm. sound equipment, received well-deserved comment.

Twenty-six per cent of the administrators expressed a desire to install a central sound projector, equipped to relay radio programs, recorded music and announcements to the various rooms of a school building. With the emphasis now being placed upon radio education by prominent organizations and departments within the profession, such demand may be expected to grow rapidly.

The biggest obstacle confronting school heads in connection with the installation of central sound systems appears to be justification, from an educational point of view, of the expenditure of the sum such equipment would cost. While administrators are convinced that good use can be made of such equipment and that the expenditure of the necessary funds is justified, they hesitate to assume the task of educating a relatively uninformed faculty and conservative public in the techniques of its effective use. Replies in this connection indicated awareness of the adage, "Be not the first by which the new is tried nor yet the last to cast the old aside."

Can Clear Finance Hurdle

There is positive indication that a definite trend toward equipping schools with central sound and radio equipment exists. We can assume with reasonable assurance that soon a sufficient number of such installations will have been made in Minnesota so that the novelty of the idea will not be the obstacle it is today. Such equipment then will be standardized and its installation be considered necessary in progressive schools. While finances are repeatedly named as the "bugbear" and chief obstacle to be overcome, the undercurrent of ad-

ministrative comment, expressed through 220 replies, indicates that the average administrator feels he can overcome the hurdle of finances once he has the data to fortify requests for the installation of necessary equipment in the name of good education. Such data are available.

Considerable demand still exists for radios. Nineteen per cent of the administrators replying to the questionnaire needed new or additional radio equipment. These figures do not include schools represented in the 26 per cent desiring a radio equipped central sound system. Demand for radio equipment varied from small sets to large receivers with several attached speakers, built in a phonograph turntable.

The motion picture camera, particularly the 16 mm. size, was listed as the next most important item of equipment desired. Particular emphasis was given by administrators to the importance and possibility of good school publicity through interpretation of the various school activities to its public. The 16 mm. camera received special emphasis since film prepared both for publicity and pupil use could be used with equipment already installed in the school. Thirteen per cent of the administrators cooperating in the Minnesota study specified their desire to have and use such equipment.

The lantern slide projector received a demand equal to that of the 16 mm. camera. Thirteen per cent of the schools planned to buy some type of lantern slide projector, while an additional 8 per cent were looking forward to adding an opaque projector to present equipment. The foregoing is not to be interpreted to mean that Minnesota educators placed great emphasis upon 16 mm. projectors and central sound systems and considered lantern and opaque projectors of less importance. In attempting to make any comparison of such figures, it is significant to note that 68 per cent of the 220 schools participating in the study already had lantern or opaque projectors as standard equipment in their visual education departments. Of the 63 per cent of the administrators who planned to install some type of motion picture equipment, only 37 per cent had any motion picture equipment at the time of survey and an appreciable percentage of that equipment was obsolete. (Thirteen per cent of the schools studied had 35 mm. silent projectors of ancient vintage.)

Other items of equipment receiving less demand were: micro-slide projectors, phonographs, still film attachments and stereographs.

The findings of the survey were favorably received. The displays of various manufacturers added to that interest. Enthusiastic interest in the equipment indicated that school administrators had spent little time and effort in educating members of the local board of education relative to the effectiveness of audio-visual aids to education.

Action of the State School Board Association spurred Minnesota educators into action with the result that a discussion of audio-visual aids to education was given a prominent place on the program of the Minnesota School Executives Council at the spring meeting held in connection with the University of Minnesota's annual schoolmen's week. The most important outcome of this meeting was the organization of a Minnesota Society for the Study of Audio-Visual Aids to Education.

School executives feel this organization will act as a clearing house and do much to promote further growth and understanding of audio-visual work. The association will emphasize the necessity for more teacher training in audio-visual education both for teachers in service and at teacher training institutions.

Minnesota educators plan to hold a two-day conference early this fall at the Center for Continuation Study, University of Minnesota. At this meeting problems pertinent to the field of audio-visual education will be discussed by Minnesota educators and national authorities. Further plans are being made to have a discussion of audio-visual education at each sectional division of the Minnesota Education Association to bring to the teacher in service essential information for audio-visual teaching.

Timesavers in Dusting

NO MATTER how well equipped is the school building, the daily routine of dusting is irksome. Methods of dusting efficiently and carrying on at the same time the maintenance of woodwork and furniture are constantly being sought by the custodian. Some suggestions are made in a recent manual put out by the Oregon Department of Public Instruction.

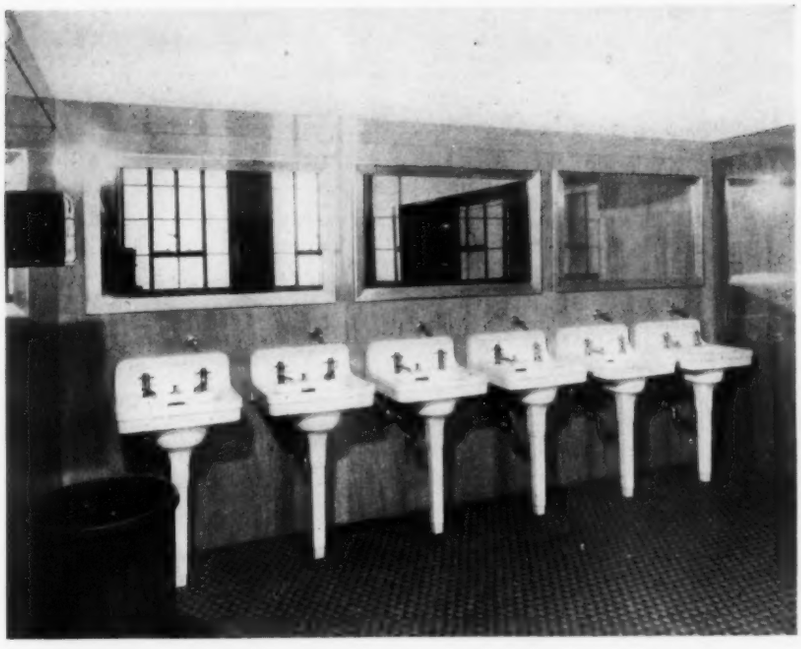
A notable timesaver is the selection of dusters that will absorb dust. For flat surfaces a large piece of cheesecloth or loosely knit material is best. For use on the vertical parts of desks and other inaccessible places, a duster of soft woolen or cotton yarn fastened to a frame that has a handle is convenient.

Avoid using water on dusters. Dusting is slower with a dampened cloth and the water tends to dull the finish of furniture and woodwork. Oil or chemically treated cloths are best. To make the cloths absorbent cedar oil, furniture polish or kerosene may be applied sparingly. If washing directions are carefully followed, purchase of chemically treated dusters is economical.

Greater speed is possible if one row of desks, for example, is dusted at a time, the janitor returning through the next row. Waste motion may be avoided by wiping the space back and forth. Early in the morning is a better time for dusting than immediately after the sweeping in the late afternoon.

In cleaning walls and ceilings during vacation periods use of a vacuum is desirable. If this is impossible the dusting may be done with a long handled brush or duster or even with a floor brush well covered with cheesecloth. Beforehand all pictures, mirrors and window shades should be removed and cleaned carefully.

Furniture and fixtures need cleaning with soap and water or kerosene at intervals. In either case the surfaces should be polished afterward with a clean, dry cloth.



The china lavatory on leg, with back about 6 inches high and having a concealed hanger, has proved to be sturdy. In addition to serving as a support, the back on the lavatory prevents splashing of the wall and makes the routine cleaning easier.

Pointers on Plumbing

By NORMAN J. RADDER

THE problem of selecting plumbing equipment for school needs must be weighed from several angles. First, every precaution must be taken to guard the pupils' health, which calls for quality material and correct installation.

Another goal of school planners, when plumbing is concerned, should be low maintenance costs. Most of the plumbing is concealed behind walls and beneath floors, making repairs and replacements difficult and expensive. The best insurance against unnecessary repair bills is first-class materials and workmanship. The slight difference that may exist in the cost of good plumbing as compared with a second-rate job will be more than offset in a short time by lower maintenance costs. This is not simply a theory — it is a fact, the truth of which has been proved time and again in the practical everyday experience of both commercial building managers and school superintendents.

As every school official well knows, pupils have a peculiar "genius" for mischievously tampering with almost anything on the school premises that may attract their fancy. Consequently, it is highly important that plumbing fixtures of the most rugged type be selected for the school to withstand the almost unpredictable forms of abuse that may be concocted in the minds of playful pupils. All nonessential trimmings should be eliminated from the plumbing fixtures; if closet tanks are used they should be securely covered, and removable parts of every description should be well tightened.

All the plumbing fixtures for the school, that is, closets, lavatories and urinals, should be of vitreous china, as this is the most sanitary material of which plumbing fixtures are made. The specific advantages of vitreous china are its nonporous glass finish, which is extremely hard and unaffected by the chemical action of soaps and ordinary acids. Another important feature concerning fixtures made of this material is that they are easy to keep clean.

The number and exact size of washrooms for pupils and teachers depend, of course, on the number of persons to be accommodated. Under no circumstances, however, should they be small for cramped quarters become cluttered easily and are difficult to keep sanitary. Washrooms should be airy and have plenty of sunlight.

The floor type of urinal is recommended for the boys' washroom. The advantage of this model is that it is suitable for all sizes of children. In some schools, however, wall-hung urinals are used, an advantage of this model being easy cleaning of the floor surface immediately below the fixtures. A disadvantage of wall-hung urinals is that they cannot be set at a height that will be suitable to all sizes of children. There is little difference in the cost of the two models.

In most cases authorities on school plumbing recommend urinals having an automatic flushing tank. It is advisable to conceal the tank if possible, or if it is left exposed, the top should be covered tightly so as to prevent pupils from throwing paper and other articles into the tank.

Vitreous china closets of the elongated shape are preferred for both the boys' and the girls' washrooms. Closets may be either of the floor type or wall hung, the latter allowing for easier cleaning of the floor surface. School planners also may choose between a blow-out closet bowl or the syphon jet closet, either type being suitable. It is important, however, that the closet selected have an extra large trapway in order to minimize the danger of clogging.

Concealed valves, which cannot be tampered with, or tanks, may be used

on the closets. If flush valves are used it is advisable to set them high enough so pupils cannot kick the handles with their feet in flushing the toilet. Metal handles are better suited to the school washroom than those made of china as they are stronger.

In some schools seat-operating closets are used, but these models are not widely recommended owing to the fact that the mechanism is likely to get out of order under the rough usage to which these fixtures are subjected. Toilet seats should be elongated to fit the bowl. Hard rubber seats of ebony finish are more practical than white seats. Open front seats are preferred.

Special provisions are necessary for kindergarten children. Manufacturers have met this requirement with lower lavatories, lower closets and smaller closet seats for very young children. For example, the special junior size lavatory is about 24 inches high, and the junior closets are about 13½ inches high.

There are a number of composition materials, all in about the same price range and of equal quality, to choose from in selecting closet partitions. It is highly advisable to select a dark colored material that will not tempt pencil marking by pupils and one that is easy to clean. In some cases doors are eliminated on the partitions in the boys' toilet room, thus reducing costs and avoiding the possibility of breakage resulting from pupils swinging on the doors.

Toilet seats should be elongated to fit the bowl and should be open front. Floor type urinals are suitable for all sizes of children.

The china lavatory on leg, about 20 by 18 inches, with back about 6 inches high and having a concealed hanger, is more sturdy than the wall-hung type. An advantage of the leg type over the pedestal is that the leg model is not as likely to be scuffed by users' feet. In addition to serving as a support, the back on the lavatory prevents splashing of the wall and makes for easier cleaning. The pop-up waste is a little more expensive than the chain and stopper, but it pays dividends in the end. Roll rim wash sinks and lavatories are used successfully in many schools.

It will prove economical in the long run to install high grade faucets, because the wear and tear on them is terrific. Self-closing faucets are especially adaptable for schools and other public buildings for severe service and when large quantities of water are used. The renewable seat type with heavy composition disks will reduce maintenance cost.

Sanitation should be the first and last thought in designing the school washroom. Consequently, careful consideration must be given to the selection of floor and wall materials that will equal in quality the plumbing fixtures. The floor and wall surfaces should be of a nonabsorbent, easy-to-clean product, such as terrazzo and tile. It is not absolutely necessary, of course, to extend the wall covering material all the way to the ceiling.

The modern school should be equipped with plenty of drinking fountains. Much progress has been made in recent years in improving the design of drinking fountains. The angle-stream type of fountain is highly recommended for school installation because it offers positive protection against the spread of epidemics by the bubbles.

The use of fixtures in color is recommended for teachers' rest rooms, as soft, pleasing colors are relaxing.

Custodians Picked With Care

By E. E. ALLEN

Experience, character and vocational ability as well as health, age and residence are important factors when the board of education in Grosse Pointe, Mich., chooses members for the operation and maintenance staff of its schools.

IN ORDER to house the instructional program satisfactorily, school buildings must be as attractively designed and efficiently maintained as is practical. Schools are "lived in." They should compare favorably in appearance, cleanliness, general comfort and convenience of arrangement with, at least, the average type of home environment from which the children come and the office and store surroundings in which their parents work.

This is not an unreasonable standard of maintenance for any board of education to set as its goal. We know that it is not unreasonable for there are many school districts with well kept and attractive buildings to show that it is practical. There are systems, however, in which such standards are accepted as desirable but in which the actual housekeeping is not too good. There may be many reasons why it is not too good and one frequently observed involves the operating personnel itself.

When a board of education has provided a well built and attractive physical plant and set up a good standard of housekeeping, it has only begun to provide the type of surroundings best suited to the health and general well being of its pupils. The next important step involves the selection of those persons who are to carry on the work in the actual housekeeping situation.

Finding the Best Man

Commitment to a sound policy of operation precludes the selection of custodians on the sole basis of the length of time they have lived in the community and have paid taxes. It makes it inadvisable to add to the staff the type of person who sits across from us at our desk and "allows" that now that he is fifty or sixty he would like to leave the shop or the store and get into some type of work that will not too heavily tax his diminishing physical powers. These people cannot be considered; we must compete with the personnel offices of business and industry to get those who will best fit into custodial positions. How are we to go about selecting the best material available for such work?

In Grosse Pointe, Mich., we have developed a procedure during the past few years that has assisted us in making such selections. This procedure is still in its developmental stages but is already enabling us to secure a satisfactory type of person for custodial positions. Our selections are made on the following bases:

I—Every applicant is granted a personal interview when he first asks about possibilities of employment.

Personal Interview First

School board members and administrative officers when approached by an applicant refer him to the person responsible for the operating program. This immediately acquaints the applicant with the fact that there is one person directly in charge of this phase of the administrative set-up. He has a personal interview and feels that his application will get beyond the office girl simply because he has had an opportunity to talk with the person in charge. The interviewer has a chance to do some preliminary sizing up of the candidate before the blank is received.

II—Every applicant is given a sheet of information concerning some policies of the board in relation to operating personnel.

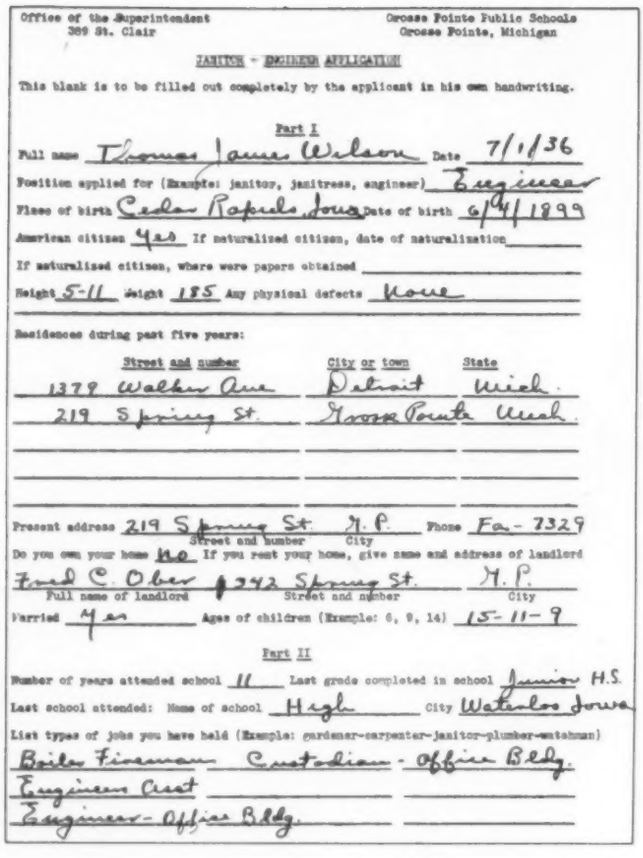
This sheet briefly tells the applicant what the board of education expects from its employees and, in turn, what the employees may expect in the way of remuneration and working load. Many candidates come to the office with a distorted point of view concerning the nature of custodial work in the schools. Many of them expect to receive a large salary and a light work assignment. Many have the mistaken idea that the school operating position is a form of old age pension enabling one to go into semi-retirement, raising flags and dusting with feather dusters until the "summons comes to join the innumerable caravan."

We have discovered that many persons who take this sheet home with them do not return their application blanks. We have not told them that they, personally, are not fitted for the work. They have discovered that fact for themselves.

III—Every applicant is given a blank that he may take home to fill out and return as his formal application.

Use Application Blank

This two-page form contains space for the type of information concerning applicants that most employers request. It goes further than the usual blank, though, in asking rather pointed questions about credit, reasons for leaving former positions and names of persons familiar with the applicant's work in positions most recently held. Space is also provided for those "to whom it may concern" types of references that a small number of persons in every community seem to be willing to supply in such an abund-



Office of the Superintendent
369 St. Clair

Grosse Pointe Public Schools
Grosse Pointe, Michigan

JANITOR - ENGINEER APPLICATION

This blank is to be filled out completely by the applicant in his own handwriting.

Part I

Full name Thomas James Wilson Date 7/1/36

Position applied for (Example: janitor, janitress, engineer) Engineer

Place of birth Cedar Rapids, Iowa Date of birth 6/4/1899

American citizen Yes If naturalized citizen, date of naturalization

If naturalized citizen, where were papers obtained

Height 5-11 Weight 185 Any physical defects None

Residences during past five years:

Street and number	City or town	State
1379 Walker Ave	Detroit	Mich.
219 Spring St.	Grosse Pointe	Mich.

Present address 219 Spring St. G.P. Phone Fa-7329
Street and number City

Do you own your home No If you rent your home, give name and address of landlord
Fred C. Ober 342 Spring St. G.P.
Full name of landlord Street and number City

Married Yes Ages of children (Example: 6, 9, 14) 15-11-9

Part II

Number of years attended school 11 Last grade completed in school Junior H.S.

Last school attended: Name of school High City Waterloo Iowa

List types of jobs you have held (Example: gardener-carpenter-janitor-plumber-watchman)
Boiler Fireman Custodian - Office Bldg.
Engineers Asst
Engineer - Office Bldg.

List the last three jobs you have held:

	Type of Job	Employer	Employer's Address	Initials and Name of Person You Worked Under
1.	Eng. Asst.	Ebe Pump Co.	Waterloo Ia.	T.M. Burke - Eng.
2.	Engineer	Farmer Bldg.	321 Jamp St. Detroit	I.P. Hurley
3.	Custodian	Watkins Bldg.	8342 Hobart Detroit	Ira Watkins

Why did you leave these three jobs? Give you reasons in each case:
1. Brother in Detroit got me job # 2.
2. Building changed hands - Owner brought in staff
3. Have not left

Are you employed on job #3 now Yes If not, on what date did you leave job #3

Part III

Do you have a bank account Yes If so, name bank and branch Security Savings

Do you have credit established at any Grosse Pointe or Detroit stores Yes

If so, name business concerns carrying your account:
Name of store Loeber Dept Store Address Bonstel St.
Name of store Haber Clothing Address Chandler St.
Name of store Address

Give names and addresses of three persons who are familiar with your work on the most recent jobs you have held:
Name J.P. Hurley Address 2164 Summit Drive Phone Fa 7-6432
Name Albert Hay Address 214 Columbus Phone —
Name Ira Watkins Address 8342 Hobart Phone Ta.-7-1963

Give names, addresses, and phone numbers of three other persons who you feel would be willing to recommend you:
Name Fred C. Ober Address 342 Spring St. G.P. Phone Fa-2178
Name Sterling West Address 2143 Lothrop W. Phone Fa 9265
Name Edmund Alter Address 724 Summit Phone —

If you should be considered for a position, would you be willing to submit to a physical examination Yes.

ance. Every person taking one of these blanks is asked to fill it out completely, being told that the candidate about whom we have the most information has the best chance of being selected for consideration.

IV—Every applicant is given an opportunity to take a qualifying examination for a position in the schools.

It is true that the average custodian new to his position must acquire much of the body of knowledge concerning his work while on the job. At the same time, we have felt that the person having the best background before working for us might possibly show the largest amount of satisfactory growth after having been with us for a probationary period.

A civil service type of examination has been developed to test this background. It is divided into four parts for those persons whose work will include only building cleaning and into five parts for those who will have the added responsibility of attending to the heating and ventilating of buildings. A description of each of these divisions follows:

1. The applicant is requested to answer a series of true-false questions designed to test his knowledge of what constitutes commonsense interpretations of policies relating to pupil, teacher, parent and supervisory relationships. For example: "If a parent comes to the school and asks to speak to a child, the custodian should conduct the parent to the child's classroom and call the pupil to the door."

2. The applicant is requested to answer a series of true-false questions designed to test his knowledge of fundamental procedures in cleaning. For example: "Wash bowls should be cleaned with a strong abrasive."

Teach Uses of Buildings

3. A copy of the board's application blank for the use of buildings by nonschool groups is filled out for a hypothetical reservation. This form, when studied carefully, gives the custodian information as to the time and place of the event, the room to be used, special equipment to be provided, and the name of the person who is sponsoring the affair. A list of regulations concerning the use of buildings by nonschool groups is also given. The person taking the examination is requested to answer certain questions about this reservation that will test his ability to understand written directions and their application to his work.

4. A simple problem in arithmetic is given that involves an estimate upon the part of the custodian of the amount of liquid hand soap he must order for the next year. He is given the probable building enrollment for the coming year and told what the per pupil soap consumption has been in past years.

5. If he is to work with heating and ventilating equipment, the applicant is requested to write the answers to a series of essay questions, testing his knowledge of the care and operation of boilers, fans, motors and other types of mechanical equipment.

An applicant's standing on this examination, plus the nature of his references, his vocational background, credit standing and age, form the basis of his success or failure in being selected. The examination is important as a basis for selection and the applicants seem to realize this to be the case. Up to the present time, we have never had a person who has made a relatively low score on this test come to us for a final report.

When an individual is selected to fill a position he is called to the office for a conference. At this time he is given more information concerning the policy of the board of education relative to the operation of the schools. He is furnished with a copy of the general bulletin to operating employees; this gives in detail the following types of information:

1. A statement of the policy that sets lines of responsibility for the administration of the operating program.
2. A statement of the policy relative to the requisitioning of supplies and materials by members of the custodial staff.
3. A copy of the salary schedule, which is set up on a service-merit basis.
4. A copy of the rating blank used by principals in evaluating the work of operating employees.
5. A statement of the policy of the board relative to the assignment of employees to their positions.
6. A statement of policy regarding hours of work and overtime.
7. A statement of the policies relative to vacations and excused absences.
8. A statement of the conditions under which an employee may leave his building during his regular working hours.
9. A list of days (such as Christmas) upon which employees are not usually expected to report for work.

During this conference the successful candidate is informed that he has been hired for a particular position and no reference is made to a possible promotion that may come to him at a specific time. He has a copy of the salary schedule with its notes and knows what promotions may be available for him if he places himself in line for them by giving a certain type of service. Pertinent information concerning personality traits of those with whom the new custodian must work is given at this time if it seems expedient to do so. This information may aid him in establishing immediately, at the time of his employment, the best possible personal relationships with his co-workers and superiors. Whenever it is possible he spends his first few days on the job with the man whom he is replacing.

The new employee is now ready to start on a probationary year with us. Before he cleans his first room or cleans his first fire, he knows much about us and we know much about him. We are not 100 per cent sure that he will be a success in his position. However, we do know that every staff member who has been selected on this basis has survived his probationary year. We have discovered that we have done well to exercise the same amount of care in selecting those who are to control the physical situation in the schools that is used in selecting those who are to control the educational situation.

After an employee has been given a probationary appointment, usually for a one-year period, he must meet certain requirements in order to receive an appointment on an annual basis. Failure to meet these requirements will lead to dismissal.

Foremost among the requirements is demonstrated ability to handle the job. The custodian must understand the importance of providing a clean, healthful environment for pupils, parents and teachers. He must have the physical ability to do his work. He must be able to recognize the responsibilities of his position and have no objections to overtime work.

Having met these requirements satisfactorily, a member of the maintenance staff may expect from the board of education:

1. Appointment for a one-year period.
2. A reasonable but substantial amount of work and the necessary tools and supplies.
3. Payment of salary according to a schedule, which operates on a basis of length of service plus efficiency. This provides for an annual starting salary of $1,440. In positions of greatest responsibility this may reach a maximum of $2,310 annually.
4. A yearly vacation of two weeks with pay.
5. For personal illness or illness or death in the immediate family he will be allowed up to twelve days' excused absence a year. This sick leave may, if unused, accumulate to fifty days in five years.
6. Protection by workmen's compensation insurance.

After all, the operating program is not just something to occupy our time or to give employment to custodians. It is a program designed to provide school children with a suitable physical environment for their school activities. We feel that we are learning how to select good men and women to do the work involved in providing this clean and healthful environment.

Doctor Looks on Lighting

THE upper part of the school window should let in all the light possible, according to Dr. Edward Jackson, of the University of Colorado School of Medicine.

"If the sun never shines on the window, during school hours, it should be of clear glass; that will let in all the light from the sky. The children will not be looking out of the top of the window, and the light cannot be too strong for their eyes. And from the top of the window, the light will reach all parts of the room more evenly. If the sun shines on the window during school hours, the light should not be kept out, but should be diffused as evenly as possible over the room. This is done by using 'ground glass,' 'milk glass,' 'prism glass,' or something of the kind. A thin coat of white paint on the glass is a cheap and easy way of keeping out direct sunlight, but still using the light in the room where it is needed.

"The new style of Venetian blinds may be used for this purpose. They have broad slats that may be turned to keep any light from coming between them. Or, when the sun is not in that part of the sky, they may be opened to let in most of the sky light. When the sun is shining on the window, they may be set at a certain angle that will reflect the direct sunlight on the ceiling; and the light ceiling will give a diffused light, almost like that from a clear sky. To use such blinds there will need to be someone in the room who knows how to adjust them and who will keep them in the correct positions."

Better Plant Practices • • •

Summer Excursion

During the past month we happened into a school building just at lunch hour when the janitorial staff was uncorking the vacuum bottles and unwrapping the sandwiches. Summer renovation and cleaning are always more difficult in an old building, and this building was old; built in the days when architects reveled in trick corners, ledges and ornamentation that invite dust and dirt.

The particular staff, and it was an unusually intelligent group of custodians, had one special problem on their minds —rodents—rats and mice that had done much damage and caused considerable annoyance during the last school term. Interchange of experiences and ideas was interrupted only by gulps of hot coffee accompanied by appreciative bites into generous sandwiches.

Someone referred to no less an authority than George B. Lay of U. S. Biological Survey, Raleigh, N. C. His recommended procedure for poisoning rats was quoted in detail. We repeat it for the benefit of those who may not have seen it.

"Use 1 ounce of red squill flue-cured powder as the poison ingredient. Mix this with 1 ounce of corn meal. Add 15 ounces of lean hamburger and as much water as is needed to make a sticky, but not wet, bait mixture. A second mixture is made with 1 ounce of red squill, 15 ounces of canned salmon or mackerel, 1 ounce of oatmeal, and water as needed, mixed as in the first method. A third mixture is composed of 1 ounce of red squill, 16 ounces of corn meal and sufficient water to make a thorough mix.

"Three kinds of bait are thus available. By placing not more than a level tablespoonful of each bait at a given point, and by setting up poison stations on the premises at frequent intervals and wherever it is known that rats run, feed and live, all the rats are given a chance at three baits. Prebaiting or using the food mixtures without the poison for a night or two, will bring excellent results after the red squill has been added to the bait.

"Never place such baits above the ground floor of a dwelling."

The Indispensable Cat

The visitor, asked to contribute to this informal forum, was reminded of the experience of W. Howard Ketring, superintendent of schools in Pinckneyville, Ill., who uses an old-fashioned method — the cat. Mr. Ketring says emphatically he would not be without that cat around his building. Mice apparently don't like it quite so well.

Despite the fact that Pinckneyville Community High School was but one year old, mice were discovered, carried in probably by way of the coal chute.

"For two years we tried trapping them," Mr. Ketring explained. "Then we put out poison. They became educated to these methods and refused to be trapped or eat the poison. When they did eat the poison they would go off to some secluded place and die. This made a bad odor for several weeks.

"Finally a stray cat came to the building. The janitor fed it until it became tame enough to go about. Believe it or not, that cat soon rid the building of mice. Our building is never without janitor service during the twenty-four hours. At night the janitor opens all classrooms doors so the cat may have access to all rooms."

Trap Your Mice

The subject of mice prompted another reference to Mr. Lay, who advocates having a few snap traps around—the kind that sell for five cents or ten cents.

"If these traps are kept set and baited at all times," he explains, "the mice that gain entrance will be caught almost immediately and before they have done any appreciable damage.

"Bait such snap traps with cheese, bread crusts, bacon rinds or other bait. It is best to tie the piece of bait to the pan of the trap with a small piece of string. This makes the result much more certain the first time the mouse tries to get the bait.

"Examine traps daily and reset them when sprung. It is not necessary to rebait just because the trap has been sprung, if the bait is still there. A piece of bread crust that has been on the pan of a trap for several weeks seems just as palatable to rodents as a fresh piece.

"If one mouse is caught, keep trying for the second, as they usually will appear in pairs."

Watch for Food

When the conversation had reached this stage nothing was left but a few crumbs and crumpled bits of wax paper.

"Look what you're doing there," the boss called to a young Swede in overalls. "Don't throw that greasy paper in the corner. You know better than that. Here we've spent the lunch hour talking about how to get rid of rats and mice and then you deliberately encourage them. My opinion is, and no one asked me for it, that if you keep everything as clean as it should be kept and don't permit any papers to lie around that may have an odor of food about them or contain crumbs or leftovers, you won't have any rats or mice."

More on Termites Later

As the bunch was breaking up to return to work, someone raised the question of termites. Too involved a subject to consider in the few minutes left, it was agreed, but then and there the visitor was urged to gather suggestions for meeting this steadily increasing menace.

Two bits of experience came to mind. One is embodied in a few brief words from W. F. Credle, director of schoolhouse planning for the state of North Carolina, Raleigh.

"It was not until recently that we became painfully aware of these pests," says Mr. Credle. "By that, I mean that we have been accustomed to take them as a kind of a matter of course, just as we would hurricanes, floods and other so-called acts of Providence. However, since a number of the buildings that were constructed some ten or fifteen years ago have suffered badly and have required so much for repairs, we have soaked all sills and joists in creosote, covered exposed ends of foundation timbers with metal and provided more ventilation for foundations."

Carbolic Acid Helps

The other suggestion on the termite problem comes from Mrs. Homer Miller of the Nevada High School, Nevada, Mo. Mrs. Miller found a few of these insects around one door and the baseboard in one hall on the basement floor. "We sprayed them with crude carbolic acid," she says. "Of course you cannot use this on finished woodwork or painted surfaces, but there is a product on the market that can be used to spray surfaces such as that. We find the time to get rid of termites is to spray them when they swarm or come out to get moisture, which they frequently have to do.

"That is the easiest method of killing them and will eventually rid the building of them entirely. You have to keep a close check around your building, especially in basements or where there is likely to be dampness.

"If we find a place infected with termites we remove the boards and paint and spray thoroughly with solution of carbolic acid."

Cafeteria hosts and hostesses hold discussion with faculty adviser in the school library.

Cafeteria Builds Better Citizens

By ALLENE MOSELEY SCHRODER

THE Elm Street Elementary School cafeteria is maintained to answer certain definite needs of 480 children living in a cosmopolitan community in which a large number of mothers are employed during the school day.

Its first justification is in the daily provision of nourishing lunches and in its contribution to the problem of efficient home and school administration. This affects those children whose parents are away from home during the noon hour and also those pupils whose homes are located too far from the school to permit them to go home for lunch.

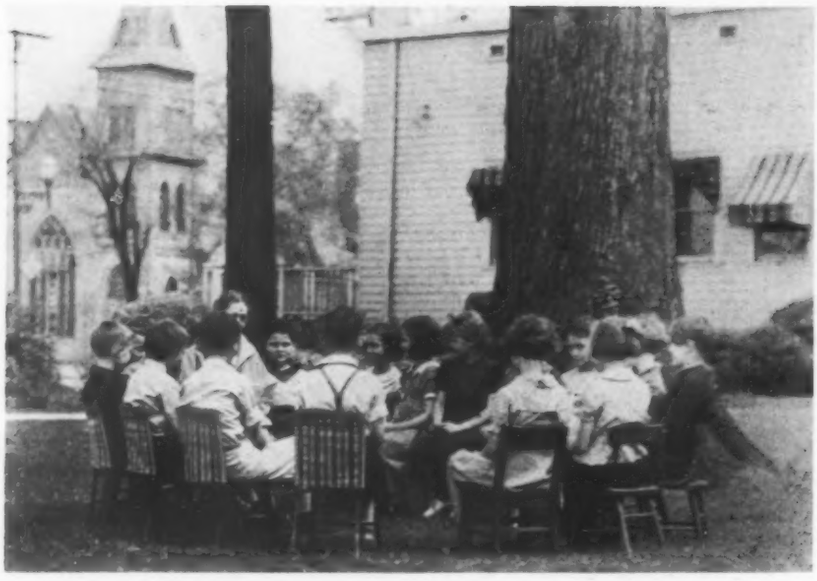
Its second justification is in its value to health education and in the establishment of daily health habits. Good health is maintained by actions combined with knowledge. Through the wholesome guidance of school authorities the health of pupils may be conserved and improved, both for the sake of the individual pupil's health and for the obtaining of better results from the teaching program.

A school cafeteria offers many opportunities for the promotion and organization of health experiences and presents them in such a way that beneficial and lasting results may be established in both the physical and mental patterns of childhood.

The third justification of the school cafeteria is in its many provisions for the training and development of real citizenship through a socializing center. It offers a cooperative situation in which the development of habits, appreciations and abilities may be furthered.

The teachers of Elm Street School are concerned with the development of the personality of each individual as completely as possible. Toward this end they realize the many possibilities of the cafeteria as a means for boys and girls to educate themselves in self-activity. An important function of the cafeteria, then, is the development of appropriate ideals of conduct. It is in such social direction of the cafeteria by the pupils, the faculty and the cafeteria personnel that dormant educational values are recognized and awakened.

The Elm Street School cafeteria must necessarily be self-supporting. It is operated on a nonprofit basis, with the best quality of food offered at a small cost. Any departure from this recognized function would make the school vulnerable not only to deserved serious criticism educationally, but also from private business enterprise. The physical properties of the cafe-



Conference hour of basement monitors under elms of Elm Street.

The cleanliness queue awaiting turns to wash before lunchtime.

teria, which is located in the basement of an old school building, are inadequate both from the standpoint of design and of materials used. Hard materials for floors, walls and ceiling create a noisy atmosphere. Lighting and ventilation facilities are not good.

The cafeteria is composed of three semi-partitioned rooms, with the kitchen and serving counter located near the center room, accessible to all. These three sections are utilized for first grade boys and girls, for older girls and for older boys. A long table for teachers is placed in the center or first grade section. This is for convenience of the staff rather than for any supervisory duties. The cafeteria opens from a long, central hall on which are grouped five lavatories, with accompanying bowls of liquid soap, individual paper towels, and trash baskets. Shelves adjoining each lavatory are provided for the placing of lunches brought from home, during the time the pupil is washing his hands.

Disadvantages of this arrangement were crowding and pushing in the poorly lighted hall, reverberating voices and the wasting of paper towels. Lack of sufficient social control and the absence of responsibility and cooperation of the pupils were demonstrated daily in the cafeteria.

The teaching staff recognized that these problems could be met and solved in an intelligent way by the pupils themselves if they were but given the opportunity. Out of pupil and faculty meetings grew the monitorial corps of boys and girls, selected by the pupils and teachers, as table hosts and hostesses of the cafeteria, as personal hygiene helpers in the halls and as supervisors of the proper selection of lunches of the smaller children—all under the expert guidance of a teacher adviser. The corps is an important branch of the junior service council of the school, which served as a clearing house for all civic and welfare activities of the school. Three teachers supervise activities of the corps.

Daily menus listing attractive, nutritious lunches are sent in the early morning to each of the fourteen classrooms. Teachers and pupils make selections of properly balanced lunches after a discussion of the food values

Patrolmen confer with principal on social control in cafeteria.

of the various dishes offered for that particular day. Habits of choosing the right foods are easily acquired when the pupil knows he must select his meal to aid growth, to furnish fuel for work and play, and to keep the body in good working order. Posters showing balanced lunches are art activities.

Personal hygiene before and after the lunch hour is recognized by the pupils as an important health measure. Each child is held personally responsible for the washing of his hands before admittance to the lunch room. This training in cleanliness is valuable for the prevention and control of communicable diseases in a school of rental textbooks.

Into the actual selection and buying of lunches there are evidences of a pronounced carry over from the health education activities of the classroom. All first grade pupils are permitted to go to the cafeteria ten minutes before the older boys and girls in order to attend without haste to personal cleanliness. Selection of their lunches is supervised daily by a group of pupils from the monitorial corps. Time and opportunity are provided during this interval for the small children, six and seven years of age, to think in terms of a properly balanced lunch. There is evidence that these young children are being stimulated in solving the problems of health by being confronted with a vital problem of their school day.

Recognizing that health education is a healthful way of living much more than a special or separate subject of the curriculum, the opportunity and obligation for the development of good eating habits in the cafeteria period are welcomed by the staff. Children learn by doing, but learn chiefly the thing that they are doing. Sufficient time is allowed on the schedule for the cafeteria period in order that haste may not hinder digestion, that worry and excitement may not be occasioned by the time element and that a happy social situation conducive to good digestion may result.

Hosts or hostesses preside at each table and discuss with the pupils from time to time the importance of chewing their food well and of carrying out good table manners as aids to good digestion. Attractively bound handbooks, setting forth rules for table manners and containing illustrations of proper habits and a well balanced menu, are referred to often by pupils and monitors. These books were prepared by the children.

The children are being led from the individualistic stage to that of group consciousness by the guidance of teachers and monitors who point out to them reasons for certain habits of behavior contributing to the common welfare. A clearer understanding of the functions of the cafeteria in the interest of all is apparent. Equally obvious is the development of a sense of citizenship and social responsibility.

FOOD FOR THOUGHT

• Here's how the children at Edgewood No. 1 School, Linn County, Iowa, get a daily hot lunch despite lack of cafeteria facilities. During these summer months their mothers are busy with canning, and three jars of vegetables are set aside for each child in the family enrolled in school. Two mothers go to school each day during the school year and prepare and serve the lunch. Enough mothers are signed for the project so that no one goes more than three times during the hot lunch season. Children who wish pay 1 cent a day for the lunch. A quart of milk credits a child with 5 cents, or lunch for a week. Staples are purchased. The school provides kitchen equipment and dishes and the mothers bring tea towels to eliminate laundry charges. Menus are planned after consultation with a dietitian. The school has four rooms.

• Every cafeteria manager knows how quickly bananas discolor after they have been sliced with a silver or metal knife. Dipping the fruit in orange juice is one practical solution to the problem. Another is the use of wood for this purpose. Have someone whittle for you a thin blade of hard wood and use this.

• A foolproof dishwashing machine which will disinfect eating utensils, as well as remove epidemiological evidences, is being tested by the American Public Health Association in the diet kitchens of the Walter Reed Hospital, Washington, D. C. Automatic time and temperature controlling devices and recorders are essential parts of the machine.

• The bureau of home economics of the U. S. Department of Agriculture finds no justification for the claim of the California Fruit Growers Exchange that oranges grown in California provide 22 per cent more vitamin C than do Florida oranges, because the variety of orange as well as the locality in which it is grown must be considered. The Washington investigators determined the cevitamic acid content of the juice of fresh valencia and navel oranges grown in California and of valencia and pineapple oranges grown in Florida. The cevitamic acid in milligrams per cubic centimeter of orange juice for each of these four varieties was found to be respectively 0.40, 0.58, 0.45 and 0.51. The bureau of home economics also points out that the California navel orange yields less juice than do other varieties of orange of equal size. What is apparent from the investigation is that all four varieties of the orange are excellent sources of vitamin C.

NEWS IN REVIEW • • • •

Colorful Career Closed

William McAndrew, probably the most picturesque figure in twentieth-century American education, died on June 28 at the age of seventy-three years.

His illness covered a period of many months and was characterized by temporary improvements, one of which permitted him to attend the meeting of the American Association of School Administrators in February where he was given the American Education Award for 1937 by the Associated Exhibitors.

Following the scandalous and farcical dismissal of Mr. McAndrew as superintendent of Chicago public schools in 1928 by "Big Bill" Thompson and his gang, Mr. McAndrew "retired" to a busy life of reviewing forty or more books a month as editor of the Educational Review of *School and Society*, of conducting the philosophical "Happy to Say" page in The NATION'S SCHOOLS and of making innumerable speeches before teachers' associations, institutes, graduating classes and gatherings of all types.

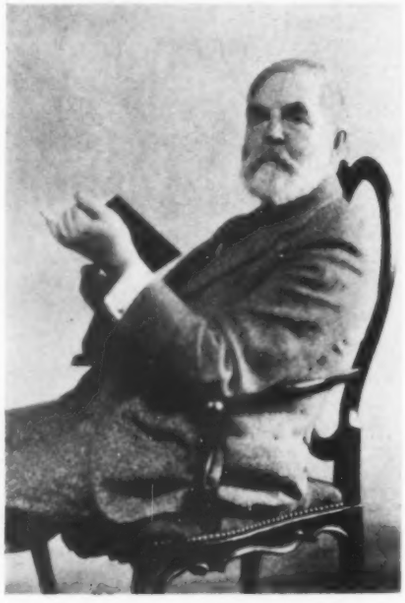
William McAndrew was from birth destined to be an individualist and a crusader for reform. His mother, Helen Walker McAndrew, having been refused permission to study medicine in Michigan because of her sex, returned to her home town of Ypsilanti two years later with an Eastern M.D. degree and settled down to practice obstetrics, the first woman doctor in the state. His father, too, was liberal minded, and both parents shared in the conduct of Sunday afternoon forums in an Ypsilanti barn where Susan B. Anthony and John B. Gough were frequent guests.

As a freshman at the University of Michigan, young McAndrew showed the initiative and courage for attack that were to characterize all his later years. He chose as a subject for a theme "Educational Mismanagement" and summarized in it the opinions of his classmates to the effect that unsupervised professors are a menace to mental health.

His teaching and administrative career began in Michigan. As superintendent of schools at St. Clair, he organized town talks on education and pupil dramatizations of town history until the whole town grew school-minded.

From Michigan he went to Hyde Park High School, Chicago, as principal. Discharged from that post, he turned his back on the schools and became advertising manager for the Great Northern Railway. That two-year experience increased his respect for the teaching profession. He returned, in 1892, to school administration as high school principal at Pratt Institute, Brooklyn.

William H. Maxwell, superintendent of New York City schools, gave Mr. McAndrew the task of organizing Washington Irving High School as a girls' technical high school. There were fights here, too, in which the New York State Department of Education and the daily press rallied around the principal, whose ideas on discipline, pupil self-government, sororities, $1 graduation dresses, demonstrations of infant care and dozens



of other live topics made this high school the most favorably publicized in the city.

Mr. McAndrew was elected superintendent of schools in Detroit in 1912. After some deliberation he refused and shortly afterward was elected associate superintendent of New York City schools, where he served for ten years. Against the advice of all his friends, he then accepted the Chicago superintendency.

Expected to survive six weeks on the job, the strong-willed new superintendent held the post constructively for four years, and in that time made spectacular contributions in improved instruction and in teachers' salaries and retirement benefits.

The struggle to keep political appointees out of the clerical posts held by certificated Chicago teachers led to Mr. McAndrew's last stand in Chicago.

"Big Bill" campaigned for reelection as mayor on his famed "America First" platform, branding the superintendent of schools as a "stool pigeon for King George" and basing his attack on the use of pro-British textbooks in the school system.

The Thompson-appointed school board found Mr. McAndrew guilty on all counts. A citizens' committee found him innocent of all charges. The court ruled the superintendent's dismissal was null and void and ordered the board to pay six months' back pay due him following his suspension. This money Mr. McAndrew characteristically refused to accept, saying that he had done no work for the schools since his suspension. Meantime his term had expired.

These are a few of the incidents in the career of the Scotch administrator and philosopher whose death is everywhere being lamented by those who admire courage and independent thinking and colorful individuality.

ADMINISTRATION

Placements Pick Up

Twenty-three vocational high schools of New York City placed a total of 5,878 pupils in jobs during the last school term. This record number of placements, according to Morris E. Siegel, director of the continuation and evening schools, indicates that industry is again able to absorb skilled workers. More jobs were open than there were pupils available in various branches of aviation, mechanical trades, the food trades, homemaking, nursing, printing and the needle trades.

School Exposition

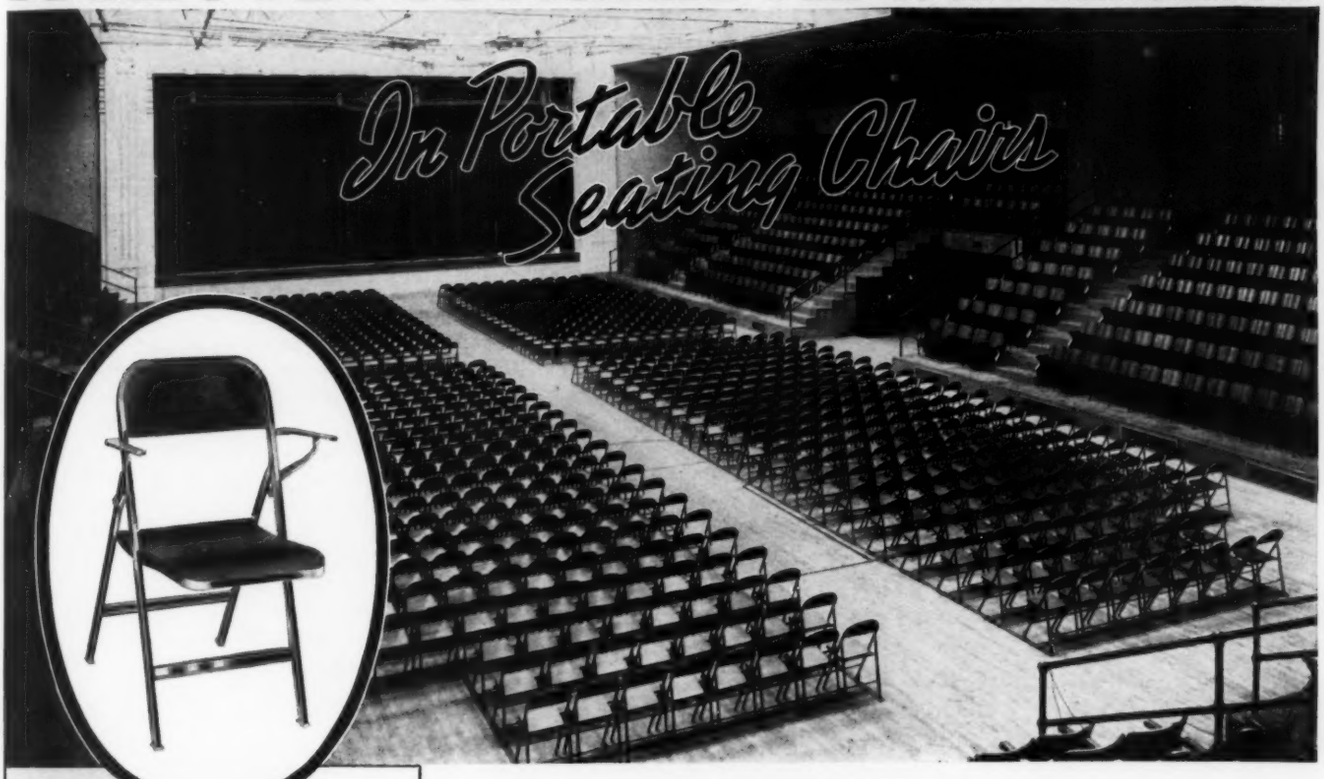
A public relations spectacle that is expected to attract 50,000 parents, relatives and friends of pupils, besides numerous educators, will be sponsored from October 28 to 30 in the form of an Exposition of the Buffalo Public Schools by the Buffalo Teachers Federation.

The exposition will show as completely as possible the great variety of work going on in the schools, including progress made in the plant department.

Dates run concurrently with those of the Erie County Teachers' Conference, Thursday, October 28, and the convention of the New York State Teachers of the Western Zone, Friday, October 29, and Saturday, October 30. Approximately 10,000 school people will be attending meetings in Buffalo during these three days.

The exposition is endorsed by the Buffalo board of education and Robert T. Bapst, superintendent of schools.

A REVOLUTIONARY ADVANCEMENT



Comfort
An extra wide seat (15-1/2") curved and pitched to fit the thigh. This permits full use of seat and full support from back as you can sit back in correct and most comfortable position. You won't "slump down" into a cramped position.

Correct Posture
The form fitting back is set at an angle most nearly approaching vertical position and supports and aids the roomy, scientifically curved and pitched seat in supporting large or small persons in an unusually restful manner.

Safety
Widely spaced legs prevent skidding, tipping or collapsing. "Correct Posture" Chairs are easily and quietly opened and closed. Will not damage fingers or clothes. They stack compactly . . . can be ganged when desired.

● Students won't "slump down" into a cramped, attention-distracting position . . . won't twist and fidget seeking relief for cramped muscles . . . while seated in the new Lyon *Correct Posture* Chair. The seat is 15-1/2" wide . . . a full 1-1/2" wider than many folding chair seats . . . is curved and pitched to fit the thigh. This, combined with a new, scientifically designed, form-fitting back, supports the largest or smallest person in an unusually restful manner.

Other Lyon "Correct Posture" Chair features that promote audience comfort and school economy . . . definite aids to successful teaching . . . are: (1) Sturdy steel construction that will not groan, squeak or clatter . . . and assures years of continuous service under hard daily use; (2) Widely spaced legs . . . with resilient live rubber feet that prevent skidding, tipping or collapsing; (3) A pinch and tear-proof hinge and the absence of rough or sharp corners . . . preventing damage to fingers and garments. Finished in exceptionally durable baked enamel, Lyon "Correct Posture" Chairs will resist chipping, cracking or scratching for many years. Write for catalog giving full details and illustrating attractive designs in plain, steel cane, and upholstered units.

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Group Enterprise

The entire instructional staff of the school system of Olympia, S. C., gathered at the University of South Carolina in June for an intensive curriculum study lasting twenty-two days. In that time, Supt. Charles M. Lockwood and his twenty-six teachers, with university assistance, outlined a course of study for both high school and grammar grades. High school teachers studied under J. McT. Daniel, university professor of education, and grade school teachers worked under Mrs. Francis P. Ford of the schools of Roanoke, Va. The school principals supervised various study groups during the session.

Friends of Public Schools

For defense of public tax-supported education a new organization known as the "Friends of the Public Schools" has opened headquarters in downtown Chicago.

Opposing the use of public funds for private schools, either sectarian or lay, the new group aims also to see that public school policy is shaped by persons who believe in and understand the public schools.

Its object is "to obtain an intelligent and enlightened American citizenry having a self-respecting regard for the rights and opinions of others and the welfare of all." Its organizer is Mrs. Greta S. Deffenbaugh, former Chicago teacher, and on the advisory board are nationally prominent men and women in fraternal, civic, parent-teacher and other societies.

The new organization is a product of seven years' preparatory work, and is in the process of putting out branches in the states. Boards of seven members already have been completed in Kentucky, Nebraska, Mississippi and Nevada. State branches will be prepared to defend the school system when any adverse legislative proposals are made in the state legislatures.

The Friends of the Public Schools is not opposed to private schools or to Christian influences in the public school systems, but it believes that public funds should not be used for the support of private institutions and that no sectarian influence should be allowed to exert itself in the public school system.

Among those who have agreed to serve on the advisory board of the new organization, not as representatives of their organizations, but as individuals, are: Charles W. Taylor, superintendent of public instruction, Nebraska; Mrs. Frances Haun, most worthy grand matron, Order of the Eastern Star, Milan, Tenn.; Col. John H. Cowles, grand commander of the Supreme Council of 33d Degree, Washington, D. C.; Thomas E. Little, American Protestant Defense League; Dr. Irene Behnke, honorary president of the Women's Republican Club of Illinois, and Walter R. Reed, secretary general of the Supreme Council of 33d Degree.

Coeducation Abolished

Coeducation has been banned in Greece as immoral and contrary to the ideals of a nationalist totalitarian state by government decree. This is the first move in the general scheme planned by the government in its effort to guide youth toward the ideals of nationalism and absolute discipline it deems necessary. Teaching history in an internationalist spirit and stressing foreign events rather than Greek ones in history are other things of which the educational system is to be purged. Some commentators have proposed to forbid the teaching of the theory of evolution.

PUBLICATIONS

Magazine for Negroes

The first issue of the *National Educational Outlook Among Negroes,* a monthly magazine, will be published in September at Washington, D. C. This magazine will translate and interpret the results of researches concerning Negroes and education in general in terms of the understanding and needs of the average Negro teacher. It will concern itself with all phases of education on all levels. The magazine will be digest size. Publishers are the National Education Press, Inc. The subscription rate will be $1 a year or 15 cents a copy.

Documentation Institute

To promote research and knowledge in various intellectual fields, delegates from leading national scholarly scientific and informational societies met in Washington recently to organize the American Documentation Institute. A first objective of the new organization will be to apply the new technique of microphotography to library, scholarly, scientific and other material. The institute was an outgrowth of Science Service's documentation activities begun in 1935, which are to be transferred to it.

Children's Literature

Two important prizes in children's literature have been announced recently—the $2,000 prize of the Julia Ellsworth Ford Foundation and the John Newbery Medal.

The first prize of the foundation for the best book manuscript for children was awarded to Claire Lee Purdy and Benson Wheeler for their book entitled "My Brother Was Mozart."

To Ruth Sawyer of Ithaca, N. Y., went the coveted John Newbery Medal for "the most distinguished juvenile book written by a citizen or resident of the United States and published during the preceding year." Presentation was made at the recent meeting of the American Library Association in New York City.

PERSONNEL

United They Stand

Fifteen thousand employees of the Los Angeles school system, including approximately 11,000 teachers, will benefit from a local retirement plan approved by the public in a special election. Under the provisions of a new California law, local school districts may establish a retirement system if authorized to do so by the people of the district at an election. No definite retirement has been presented by the board of education, but it is understood that the local retirement system will augment state allowances to teachers by from $50 to $60 a month, enabling them to retire with aggregate allowances of about $100 monthly.

A noteworthy feature of the success of the teachers and other employees in securing public approval of the proposal at the polls was the unity of the teaching profession and the noncertified employees of the district.

Right to Wed

The right of women teachers to marry is the objective of a Teachers Alliance with headquarters at 3258 O Street, N. W., Washington, D. C. The announcement of the alliance points out that "for half a century teachers have demanded and slowly won their rights. . . . Unreasoning emotionalism, a product of the depression, forced through reactionary legislations." The alliance urges teachers to write at once to representatives of their state and ask for the repeal of a clause of the Economy Act of 1932, discriminating against women teachers.

Below Civil Service

Teachers' pay cuts in California during the depression are still in effect in some communities despite the fact that the cost of living has been steadily rising and that wages in most industries have reached the predepression level of 1929, it was revealed in a statewide survey comparing the pay of school teachers with other California groups conducted by the California Teachers Association.

"In some districts" says the report, "partial restoration of automatic increases as a reward for professional improvement were effected. But in the majority of districts, employing by far

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We quote this from a bulletin of the National Education Association.

Authorities do recognize the importance of good tires to safe pupil transportation. And more and more of them continue to recognize the greater safety of Goodyear Tires.

Blowouts are dangerous—skidding, according to insurance figures, is even more so. That's why you can't afford to take chances with anything less than doubly-safe Goodyears.

Goodyear Tires combine Supertwist Cord construction —*blowout protection in every ply*—with the deep, tough, gripping diamonds of the famous All-Weather tread to give you the safest of all safeguards against blowouts plus the grip and sure-footedness needed for emergency stops and safe travel on wet or muddy roads.

Play safe by specifying Goodyears — whether on your own or contract equipment.

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GOODYEAR LifeGuard* Tubes make blowouts as harmless as slow leaks. Should a blowout occur—there's an inner tire that supports the load and gives the driver ample time to bring his bus to a slow stop under full control.

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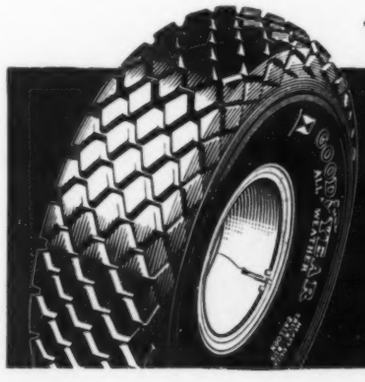

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GOODYEAR

TRUCK AND BUS TIRES

the great majority of teachers, restoration of salary cuts made during the depression and resumption of salary schedules have not been made.

It was pointed out that the plumber's helper, teletype operator and stenographer, institutional seamstress, ship's laundryman, the institutional meat cutter and butcher in state service, all have been receiving the same minimum wage of $1,320 to which teachers have just now been raised.

Other minimum wages in state service include ratings as follows: senior typist clerk, $1,920; senior account clerk, $1,800; senior clerk, $1,680; institution mechanic, $1,680; beef herdsman, $1,560; service file clerk, $1,440; mechanical handyman, $1,440.

RADIO

Broadcasts, Real and Mock

Hundreds of requests for educational radio scripts received each month from schools and colleges by the Educational Radio Script Exchange indicates an all-time high for school use of radio this fall. Many of the schools will use the scripts for mock broadcasts over public address systems and for other intra-school purposes, while others will produce them over local radio stations when the new school year begins, it was said. The script exchange was organized last October as a joint effort of the federal radio education committee and the educational radio project of the U. S. Office of Education. The response is beyond all expectations.

Standardizing Speech

The radio is one of the forces which are expected to standardize American speech on a high level within twenty-five years, according to Prof. Gail Densmore, University of Michigan speech department. Observations of the speech habits of his students over a period of years decided Dr. Densmore that the trend was well started and that colloquialisms and mispronunciations are disappearing among those who have been radio listeners for some time.

Classic Dramas

Radio dramatizations of the classics by the Junior League of Dayton, Ohio, have created a listening audience of about 2,000 pupils in the public schools. Each Wednesday at 2:30 p.m. (school is dismissed at three), a half-hour program is presented, the plays being chosen by the teachers. Among the first presentations were "The House of the Seven Gables," "Macbeth," "She Stoops to Conquer," and "The Taming of the Shrew."

As the program is a sustaining feature, the expense of the scripts, director's salary and printed programs have been assumed by the radio station.

Junior Leaguers are trained in radio technique by a professional director, and male character parts are taken by men of semi-professional and professional standing.

Similar work in public schools has been done by the Junior Leagues of Portland, Ore.; Vancouver, B. C.; Oklahoma City, Okla., and Canton, Ohio.

Program for Parents

Since 1934 Radio Station WFBR, Baltimore, has been providing time on the air for announcements and information that school authorities wished to bring before the attention of the public. In October, 1935, a new policy was adopted. Instead of a short daily program the school radio program became a weekly feature of fifteen minutes. Advertisement of school bazaars and Parent-Teacher Association meetings were no longer included, but it undertook to furnish parents and citizens with important information regarding the public schools of Baltimore, such as unusual creative work, comparison of old and new methods of teaching and talks by authorities in education. Between October, 1935, and June, 1936, thirty-eight programs were broadcast, which represented all branches of the school system and nearly 250 persons participated in the broadcasts.

Analyzes Audience

Students and professional workers were found to constitute the greatest part of the audience of the educational radio series, "The World Is Yours," presented by the U. S. Office of Education, according to results of a recent analysis of 10,000 questionnaires returned by persons who are regular listeners to the program.

Of the questionnaires analyzed, 2,273 were from grade and high school pupils and college students; the professional group was represented by 1,651, while the third largest group was skilled and unskilled workers.

Each program of the broadcast, which is produced in cooperation with the Smithsonian Institution, dramatizes the history of some important exhibit on display. The broadcast may be heard from the Red Network stations of the NBC Sundays at 4:30 p.m., EDST.

Denounces Requests

What he terms a "national education racket," the habit high school and college students have acquired of writing to authors, commentators, artists, statesmen and other public figures, expecting to receive a complete essay in response to a few questions, was roundly de-

With PWA assistance many unsightly and insanitary schools have been replaced by modern buildings. These "before and after" pictures come from a farming section near Marlow, Ga. The new building has an auditorium for community use.

Be prepared . . . show them the way to *"Healthful Cleanliness"*

THIS YEAR be sure your washroom equipment is the finest and most economical. Decide now to install Palmolive "Measured Soap" . . . the unique soap system that saves you money and helps teach your pupils "Healthful Cleanliness!"

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The Palmolive Dispenser is made of sturdy bronze heavily chromium plated with a big reservoir that holds enough soap for 300 washes. It cannot cake, clog, corrode or be "drained," and will always look neat no matter how often it is used.

Pure, gentle soap

The dispenser is designed to use world-famous Palmolive Soap in a special new free-flowing form that immediately works up into a thick, rich lather in either hard or soft water. And, because it is made with a special blend of gentle Olive and Palm Oils, it is always kind and soothing to the skin.

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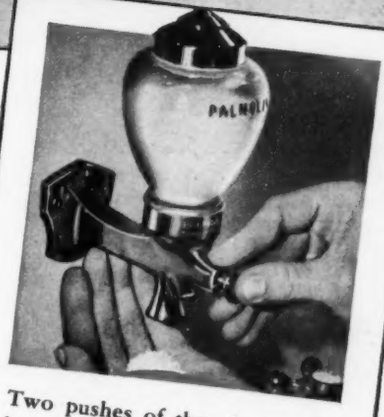
The Palmolive "Measured Soap" System can save you as much as 30% to 40% on washroom soap costs! Because it accurately "measures out" just the right amount of soap, it eliminates waste. Tests prove that it supplies 100 washes for 1¢.

Investigate this efficient, economical soap system now, while prices are still low! Write us for full information. No obligation.



Two pushes of the plunger releases enough soap for one wash. There's no waste. You save money!

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COLGATE-PALMOLIVE-PEET CO. JERSEY CITY, N. J.

nounced by Deems Taylor, commentator for the New York Philharmonic Symphony Orchestra, recently. Mr. Taylor suspects that teachers are abetting rather than discouraging this practice, since one letter stated that, "My teacher says I may have an extra credit if you will sign your reply." The answers to most of the questions may be found in any library, he said.

INSTRUCTION

Traffic Safety Camp

The first Schoolboy Traffic Officers' Training Camp in Indianapolis will be held August 30 to September 3 under the auspices of the Indianapolis Safety Education Council and the Indianapolis Council of Parents and Teachers. The four-day period of training in safety practices, life-saving, first aid and supervised recreation is designed to prepare the traffic officers for leadership in the Schoolboy Safety Patrol Squads next year. Each school affiliated with the Safety Education Council has been asked to send to the camp two boys to serve as the captain and lieutenant of next year's traffic squad. A staff of physical education teachers and other teachers experienced in camping and in boys' work will be selected to have charge of the camp.

Enrich Curriculum

The use of supervised correspondence courses to enrich the secondary school curriculum is being taught in a course being offered this summer at Teachers College, Columbia University, beginning August 2.

Nicest Experience

Florence E. Clippinger, biology teacher, Roosevelt High School, Dayton, Ohio, asked her pupils to write down three of the loveliest things they had ever experienced. Here are some answers, as reported in *Ohio Schools:*

To get an odd job at Christmas time so that I can buy my folks some presents.

A baby chick riding on its mother's back.

A teacher in a good mood.

The first time I led the school band.

When my nephew said "Uncle."

When I have been on a visit and come home and sleep in my own bed.

Watching a two-day litter of pups playing together.

The Ozarks after a heavy snowfall.

When my little brother comes down on Christmas morning. He just stands and grins.

My mother and my pop.

Sunrise on the Ohio River.

Five hundred acres of ripe wheat in Kansas with the hot breeze blowing softly over the golden heads, making it look like the ocean, only brown in color.

When I am handed my report card promoting me to the next grade.

Vote Down Flag Bill

By a vote of 17 to 7 the senate of the Illinois state assembly refused to pass a bill requiring that the American flag be displayed in every classroom in all Illinois schools and that pupils recite the oath of allegiance every school day morning.

Argument

The fourth grade teacher and the health director exchanged words over the basketball game played in the basement of Public School No. 19, Manhattan, in the early afternoons.

"The boys return to me from that basement so disheveled, dirty of hands and grimy of face that I can't endure them for the rest of the afternoon," the irate teacher protested.

"The boys need big-muscle exercises. They need to learn controls, good sportsmanship and concentration on play," defended the man who supervised their play.

Principal Margaret A. Lindquist took a hand in the matter. A teaching technique was developed that produced a new attitude toward cleanliness among the young Italian-Americans who largely make up the school. The Eastman classroom film, "Clean Hands and Face," was shown and from it the class made two definite plans: (1) to obtain soap and towels so as to "clean up" after the game period, and (2) to obtain toilet articles so as to clean up at home and be able to come to school clean. The first class has now progressed to a new study utilizing the Eastman film, "Clean Clothes," to introduce the second activity.

MEETINGS

Food Conference

Interesting plans are being made for the meeting of the Food Service Directors Conference to be held in Boston Nov. 5 to 6. Various studies are being made for presentation at that time.

They are: standardization of portions, plate dishes and single dishes, Margaret E. Brennan, John Adams High School cafeteria, Queens, N. Y.; standardized recipes, Doris Zumsteg, Theodore Roosevelt High School cafeteria, Bronx, N. Y.; finance, Elvira G. Potter, Brookline School lunchrooms, Brookline, Mass.; specifications for checking bread and spaghetti, Mary Kelly, director of school lunchrooms, Hartford, Conn.; methods of store control, Grace Helene Miller, Board of Education, New York City; wages and personnel, Mary McGowan, Girls Commercial High School cafeteria, Brooklyn, N. Y., and Mary deGarmo Bryan, Teachers College, Columbia University, New York City; sanitation and health, Mae Paige, West Hartford School lunchrooms, West Hartford, Conn.; outside competition, F. O. Washam, director school lunchrooms, Chicago; teaching table manners, Martha Westfall, Board of Education, New York City; education and health, Beatrice Hall, Connecticut Dairy Council, Hartford; maintenance of equipment, Emma F. Holloway, Pratt Institute, New York City; insurance, Mary deGarmo Bryan, Teachers College, Columbia University, New York City.

Dr. George R. Minot, Nobel Prize winner, is to be the principal speaker, and will discuss the school lunchroom as a laboratory for health education and nutrition. Also on the program is Dr. Henry D. Chadwick, Massachusetts commissioner of public health. It was proposed to keep the various meetings and discussions practical to meet the demands and needs of school lunchroom managers.

Finger Lakes Custodians

School custodians to the number of eighteen gathered at Clifton Springs, N. Y., and founded a permanent organization to be known as the Finger Lakes School Custodians Association. The object of this group is to promote an exchange of ideas to raise the standards of the profession. Charles Welch of Wolcott, N. Y., was elected president and Mr. Smith of Clifton Springs, secretary. Following the business session there was an informal discussion of methods and materials. The next meeting will be held at the Wolcott Central School, September 18.

Custodians' Convention

Evidence of the awakened interest in technical training for the school engineer and custodian was shown in the large attendance at the seventh annual convention of the National Association of Engineers and Custodians held in Oklahoma City from June 14 to 19, in conjunction with the Oklahoma State Short Course for School Custodians. Four hundred sixty delegates registered for the convention and 450 registered for the school. These figures do not include 103 women for whom a short course was arranged.

As its official training program, the national association adopted the Oklahoma State Short Course for School Custodians, prepared by W. Fred Heisler of the Oklahoma A. & M. College, Stillwater. Mr. Heisler was reelected chairman of education of the association.

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Classes in the short course were conducted for four and one-half days in the following subjects, the remainder of the week being given to the convention: first aid, human relations, school building management, landscaping, arithmetic, heating and ventilation, air conditioning, housekeeping, electricity, elementary science, leadership training, school plant maintenance and general school custodianship.

St. Louis was selected as the meeting place for the 1938 convention. "We are anticipating a larger and better convention next year, as well as further progress toward the elevation of standards and requirements for men engaged in the operation and maintenance of school plants," O. M. Schlosser, president, has announced.

GIFTS

Rensselaer Trusts

Two trust funds almost equaling the present $6,000,000 endowment of the Rensselaer Polytechnic Institute at Troy, N. Y., were established in 1921 for that institution, it was disclosed recently in filing a transfer tax appraisal. The trusts now have an aggregate present value of about $5,880,000 and were established by the late Mrs. Cora L. Cogswell, widow of William B. Cogswell, one of the founders of the Solvay Process Corporation and Semet Solvay Company, which were merged with Allied Chemical and Dye Company some years before his death.

Vast Treasury

At the University of Michigan's 100th commencement it was announced that the university's recent acquisition of 60,000 manuscripts bearing on the most intimate phases of the American Revolution is now thrown open to the public. This vast treasury makes the university supreme in source material dealing with the Revolution from the British side. It is the gift of the late William L. Clements, Michigan alumnus, steel magnate and judicious collector of Americana, who died in 1934.

Walgreen Turns

A gift of $550,000 to establish at the University of Chicago the Charles R. Walgreen Foundation for the Study of American Institutions has been made by Charles R. Walgreen, head of the drug store chain, who two years ago went to battle with university authorities over allegedly Red influences on the part of certain members of the faculty. Mr. Walgreen's gift enabled the university to secure an additional sum of $275,000 that had been offered conditionally on a matching basis.

HEALTH

Record Hearing

All new cadets entering Culver Military Academy will be given hearing tests by use of an audiometer. Instructors frequently send cadets to the infirmary for sight and hearing examinations in an attempt to find reasons for some academic difficulty they may be having. The audiometer results are recorded on a chart or graph, and are much more accurate than the old "whisper" method of testing hearing.

Gland Clinic

The Detroit public school system has an actively functioning Endocrine Gland Clinic, a branch of the city's special education clinics. The clinic is located on the first floor of the Moore School and between the opening of school in September and the Ides of March had examined 655 pupils and made 1,652 visits. After examination, the children are referred to the department of special education or to doctors, nurses, principals, the psychological clinic, the speech clinic or outside agencies.

German Schools Bar Unfit

All but the mentally and physically fit are now refused admission to the secondary schools of Germany. According to the Journal of the American Medical Association, the national minister of education has decreed that young persons afflicted with presumably incurable disorders which impair the vital forces as well as carriers of hereditary disease shall no longer be accepted in the secondary schools. Young persons who show an aversion to cleanliness and those who by nonparticipation in physical exercise exhibit an unwillingness to achieve physical hardihood are subject to expulsion unless express recommendation that they be permitted to remain is made by both the official physician and the instructor in athletics.

From Little Acorns

Teachers in the schools of Fort Madison, Iowa, formed a child health fund six years ago when the depression began to show its distressing effects. They voluntarily set aside 2 per cent of their salaries to provide food and medical care for indigent pupils.

Now they have the pleasure of watching this work being carried on in a competent manner by various organizations and citizens. This year more than $3,000 is being spent on health work in the schools in this town of 14,000 population. Children who used to be given diphtheria immunization upon entering school are now protected at a much younger age. Last September 700 Fort Madison children over nine months of age were given toxoid at a cost of $700. Some $600 is being spent this year on tonsillectomies and medical attention; $900 on milk, lunches and clothing, and $800 on dental work. All children have been tested twice for hearing defects, and as a result a lip-reading teacher has been added to the staff.

Where does the money come from? The local Red Cross gives $400 a year; Rotary Club, $100; board of education, $300; P.-T. A., $200; King's Daughters, $150. Donations from the city council and board of supervisors, American Legion and schools will total another thousand. Benefits and private contributions do the rest. But it all began with the teachers.

ANNIVERSARIES

For Modesty

Reed College, which during its history had awarded only one honorary degree, this year celebrated its twenty-fifth anniversary by making a nationwide search for five persons in no way connected with the college upon whom to confer doctor's degrees for fine public services, modestly and effectively rendered.

Two of the honorary degrees awarded were in the field of education, that of doctor of education: to Ruth West, a distinguished classroom teacher of the Lewis and Clark High School of Spokane, Wash., and to Willard Walcott Beatty, director of education in the federal bureau of Indian affairs.

Doctor of laws degrees were awarded to: Rudolph Forster, for forty years a member of the secretariat at the White House and adviser to eight presidents; Louis Stark, reporter of industrial and labor relations for twenty-five years for the New York *Times*, and William Lewis Brewster, Portland citizen, who for forty-six years has devoted himself to the welfare of the community.

In Costume

To celebrate the fiftieth anniversary of the Horace Mann School, Broadway and 120th Street, New York City, costumes of the late nineteenth century were donned by school children and teachers.

Wearing a Prince Albert coat and beaver hat, Dr. Rollo Reynolds, director, recalled the era of the "three R's" and predicted that in the future schools will place more emphasis on fundamentals, "like giving children an opportunity to create and appreciate art, developing in them attitudes of fair play, justice, tolerance, consideration and affection and teaching them how to live."

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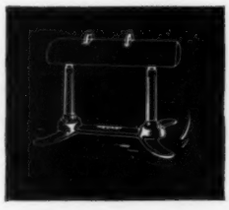

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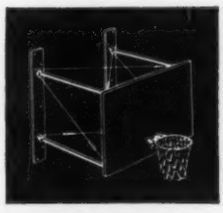

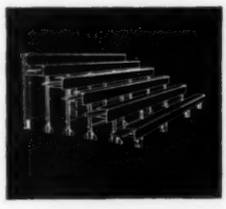

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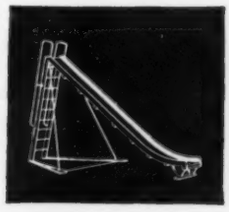

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Protect your office supplies, records, and your clothing; store them in a Medart Steel Cabinet or Wardrobe. Baked enamel finish.

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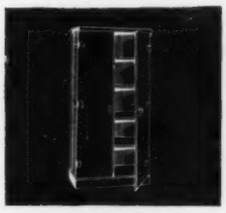

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NAMES IN NEWS

Among the Superintendents

L. R. BUNTING, who has been superintendent of the high school and connected with the State Teachers' College at Huntsville, Tex., has been appointed superintendent of schools at New London, Tex., to succeed W. C. SHAW and T. M. JONES, who both resigned.

MARY B. MCANDREW, superintendent of schools at Carbondale, Pa., has been appointed a trustee of the State Teachers College at East Stroudsburg, Pa.

J. B. STOUT recently resigned his post as superintendent of schools at Norman, Okla., to accept a position at Northwestern State Teachers College, Alva.

FRANK R. WASSUNG, who has been connected with the schools of Norwich, N. Y., since 1915 and has been superintendent since 1919, has resigned to accept the superintendency at Garden City, L. I., where WINFIELD A. TOWNSEND has resigned. DR. E. R. VAN KLEECK, who has been village superintendent at Walden for nine years, has been unanimously elected city superintendent at Norwich.

F. H. HARRIS of Greenfield, Ohio's flying superintendent, extended his annual summer air cruise to a trip around the world this year. Early in June he flew to the Pacific Coast, boarded one of the clipper planes to Hongkong, China, and flew across Asia, Africa and Europe to London. Original plans included the Atlantic crossing on the Hindenburg. In 1935, Superintendent Harris made an 18,000-mile air tour of South America and in 1936 crossed on the Hindenburg for the Olympic games.

LOY NORRIX, superintendent of schools at Houghton, Mich., has been appointed superintendent at Kalamazoo, succeeding HEROLD C. HUNT, who resigned to accept the superintendency at New Rochelle, N. Y.

W. B. IRVIN, for the last twelve years superintendent of schools of Perryton, Tex., resigned recently to accept the position as superintendent of schools at Lubbock, one of the largest schools in West Texas.

W. HOWARD VANDERHOEF, for twelve years superintendent of schools at Bath, N. Y., will succeed FRANK E. FISK as superintendent of schools at Canandaigua, N. Y.

NORMAN E. JOHNSON of Sand Point, Ida., will replace O. T. PETERSON as superintendent of schools at Brewster, Wash.

GUY WELSHIMER of Columbus will succeed GLENN DRUMMOND as superintendent at Belle Center, Ohio.

BURR F. JONES has been elected superintendent of schools in the three-town union of East Longmeadow, Hampden and Wilbraham, suburbs of Springfield, Mass., succeeding FREDERIC A. WHEELER.

JOHN W. ROBISON has been named superintendent of schools at Eaton, Ohio, succeeding JOHN MICHAELS, who recently resigned.

FULLER L. AUSTIN, superintendent of schools in Southbridge, Mass., has resigned to accept the superintendency of schools in New Canaan, Conn. He is being succeeded at Southbridge by CHANNING H. GREENE, since 1929 principal of the Mary E. Wells High School, Southbridge.

SUPT. A. D. HORTON of the schools of Ridgefield, Conn., and the board of education of that community have included substantial additions in next year's budget that will make possible further curriculum studies, as a result of the Strayer-Engelhardt survey of the curriculum offerings, the school building needs and the town's financial ability.

Principals

JOSEPH T. BENEDICT, twenty-six years old, is believed to be the youngest high school principal in New England, having recently been elected head of the Essex High School, Essex, Mass. At New Hampshire State University he was a star pitcher and captain of the basketball team.

RUBY V. PERRY, principal of the Henry W. Allen High and Elementary Schools, New Orleans, has been named principal of the Margaret C. Hanson Normal School to succeed the late JOSIE B. SOARES.

ELLSWORTH TOMPKINS, vice principal of the East Side High School of Paterson, N. J., has been elected principal of the Bangor High School, Bangor, Me., to succeed CHARLES E. TAYLOR, who is to be principal of the high school in Biddeford, Me.

PAUL A. REHMUS, principal of the Battle Creek High School, Battle Creek,

Coming Meetings

Aug. 2-6—Conference on Assisting the Unadjusted Pupil, Cornell University, Ithaca, N. Y.

Aug. 2-7—World Federation of Education Associations, Tokyo, Japan.

Sept. 26-28—New York Council of School Superintendents, Saranac Inn, New York.

Oct. 1-2—Secondary Study Conferences, Progressive Education Association, New York City.

Oct. 7-8—Michigan Educational Association: Region 5, Alpena; Region 7, Sault Ste. Marie.

Oct. 7-9—Vermont State Teachers' Association, Rutland.

Oct. 11-15—National Association of Public School Business Officials, Baltimore.

Oct. 14-15—Michigan Education Association: Region 2, Flint; Region 3, Jackson.

Oct. 14-15—Minnesota Education Association: Northeast Division, Hibbing.

Oct. 15-16—Regional Conference, Progressive Education Association, Los Angeles.

Oct. 18-29—Washington Education Association; Wenatchee and Yakima, Oct. 18-19; Spokane and Walla Walla, Oct. 21-22; Bellingham and Tacoma-Seattle, Oct. 25-26; Aberdeen and Vancouver, Oct. 28-29.

Oct. 20-23—National Council on Schoolhouse Construction, Columbus, Ohio.

Oct. 21-22—Indiana State Teachers' Association, Indianapolis.

Oct. 21-22—Michigan Education Association: Region 6, Detroit; Region 8, Battle Creek.

Oct. 21-22—Minnesota Education Association: Central Division, St. Cloud; Northern Division, Bemidji; Southeast Division, Winona; Southwest Division, Mankato; Western Division, Moorhead.

Oct. 21-23—Utah Education Association, Salt Lake City.

Oct. 25-28—National League to Promote School Attendance, Chicago.

Oct. 27-29—North Dakota Education Association, Minot.

Oct. 27-30—Nebraska State Teachers' Association: District 1, Lincoln; District 2, Omaha; District 3, Norfolk; District 4, Grand Island; District 5, Holdrege, and District 6, Scottsbluff.

Oct. 28-29—Maine Teachers' Association, Portland.

Oct. 28-29—Michigan Education Association: Region 4, Grand Rapids.

Oct. 28-30—Michigan Education Association: Region 1, Detroit.

Oct. 28-30—Regional Conference, Progressive Education Association, Chicago.

Oct. 28-30—Rhode Island Institute of Instruction, Providence.

Oct. 28-30—Wyoming Education Association, Thermopolis.

Oct. 28-30—Colorado Education Association, simultaneous meetings at Denver, Grand Junction and Pueblo.

Oct. 28-30—Montana Education Association: Western District, Kalispell; Southwestern District, Butte; Eastern District, Miles City; North Central District, Great Falls.

Oct. 29—Connecticut State Teachers Association, simultaneous meetings at Hartford, Bridgeport and New Haven.

Nov. 4-5—Arkansas Education Association.

Nov. 4-6—West Virginia Education Association, Clarksburg.

Nov. 4-6—Iowa State Teachers Association, Des Moines.

Nov. 5-6—Food Service Directors Conference, Boston.

Nov. 5-6—Kansas State Teachers Association, simultaneous meetings at Lawrence, Manhattan, Dodge City, Hays, Parsons and Wichita.

Nov. 12-13—Regional Conference, Progressive Education Association, Ann Arbor.

Nov. 12-13—Arizona Education Association, Tucson.

Nov. 12-15—New Jersey State Teachers' Association, Atlantic City.

Nov. 14-17—Association of Land Grant Colleges and Universities, Willard Hotel, Washington, D. C.

Nov. 17-20—Missouri State Teachers Association, St. Louis.

Nov. 18-19—Delaware State Education Association, Wilmington.

Nov. 19-20—Louisiana Teachers Association, Shreveport.

Nov. 19-20—Regional Conference, Progressive Education Association, Philadelphia.

Nov. 21-24—South Dakota Education Association, Sioux Falls.

Nov. 22-23—New York State Education Association, house of delegates, Jamestown.

November (Thanksgiving Week)—Virginia Education Association, Richmond.

Nov. 25-27—Texas State Teachers Association, Houston.

Nov. 26-27—Idaho Education Association.

Dec. 2—Regional Conference, Progressive Education Association, Springfield, Mo.

Dec. 3-4—Regional Conference, Progressive Education Association, Tulsa.

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(Dibrom-ozymercuri-fluorescein-sodium)

Mich., has accepted the principalship of the high school at Grosse Pointe, Mich.

JOHN R. PATTERSON, supervising principal of Roselle, N. J., has been appointed to the same position in Millburn, N. J. JOSEPH BUSTARD, a principal in the Roselle school system, succeeds Mr. Patterson.

W F. LOGGINS, superintendent of schools at Sumter, S. C., has announced the appointment of HUGH T. STODDARD as principal of the Boys' High School and of MRS. LOUISE Y. EARLE as principal of the Girls' High School.

W. BAY IRVINE, assistant principal of the high school at Sharon, Pa., for ten years, has been named principal of Kittanning High School, Kittanning, Pa.

JOSEPH MCMICKLE, supervising principal of the Stanhope-Netcong public schools at Netcong, N. J., is retiring this year after completing more than thirty-five years of service.

J. L. BREWER, principal of Polk County High School, Benton, Tenn., for twenty-four years, has resigned. Mr. Brewer is a former president of the East Tennessee Educational Association and the State Public School Officers' Association.

FRANK H. HARTZELL has been elected principal and HARRY H. MERCER, assistant principal, of the high school at Collingdale, Pa.

County Superintendents

REED GRONINGER, who retires August 15 as superintendent of schools of Cass County, Indiana, after eight years in that office, has been employed as superintendent of city schools of Attica, Ind.

F. F. SCHAEFFER, for many years instructor in the high school, Yankton, S. D., will succeed MRS. FLORA S. RIVOLA as county superintendent of schools, Yankton.

A. G. WELSHEIMER, former principal and superintendent of schools at Crestline, Ohio, and head of Champaign County schools for some years, recently was elected superintendent of schools of Logan County, Ohio. During the past few years, Mr. Welsheimer has been with the Ohio State Department of Education.

ELBERT G. GRIFFITH, a teacher of mathematics in the schools of Greenfield, Ind., recently was elected superintendent of the schools of Decatur County, Indiana.

In the Colleges

DR. CARTER DAVIDSON, previously professor of English and assistant to the president of Carleton College, was installed as president of Knox College, Galesburg, Ill., following commencement exercises. The charge to the new president was given by DR. JOHN H. FINLEY, editor of the *New York Times*, formerly president of Knox College.

JAMES PHINNEY BAXTER III, Harvard professor, has been named president of Williams College, succeeding DR. TYLER DENNETT, who resigned the post held for three years because of differences with the trustees.

DEAN MARY ASHBY CHEEK of Mount Holyoke College has been appointed president of Rockford College, to succeed DR. GORDON K. CHALMERS, who has been elected president of Kenyon College. Miss Cheek has been dean of residence and lecturer in history at Mount Holyoke since February, 1931.

GLENN FRANK, former president of the University of Wisconsin, has become president of Rural Progress, Inc., a monthly agricultural publishing company, and will serve as the editor of its journal. Before he went to Wisconsin eleven years ago, Doctor Frank was editor of the *Century*. *Rural Progress* is published in Chicago, and it is understood that its new editor will make his home in Madison, Wis.

DR. HOLLIS L. CASWELL, professor of education at George Peabody College for Teachers; DR. WILL FRENCH, superintendent of schools, Long Beach, Calif., and DR. KARL W. BIGELOW, formerly of the University of Buffalo, now visiting professor of education at Teachers College, Columbia University, have been appointed professors of education at Teachers College.

DR. HAROLD R. BENJAMIN, professor of education at the University of Minnesota, has been appointed director of the college of education of the University of Colorado to succeed DR. HARRY M. BURNETT.

MARGARET F. SCHAEFFER GLACE of the State Teachers College, Shippensburg, Pa., has been made head of the teacher training department of the school of fine and practical arts, Maryland Institute.

DR. FRANCIS M. CROWLEY, dean of the school of education at St. Louis University, has been appointed professor of education at Fordham University.

DR. J. B. MACGREGOR of Eastern Illinois State Teachers College has been elected dean of Cornell College, Mount Vernon, Ia.

PROF. C. EMANUEL EKSTROM, chairman of the department of education at Brown University, has been awarded the Royal Order of Vasa medal by King Gustav V of Sweden for his anti-tuberculosis work.

H. VANCE POSEY, Stillwater, Okla., has been named president of Southeastern State Teachers College at Durant, Okla. Mr. Posey formerly was athletic manager and professor of history at Oklahoma A. and M. College.

Deaths

DR. CLARENCE H. DEMPSEY, superintendent of schools in Arlington, Mass., and former commissioner of education for the state of Vermont, died following a long illness at his home in Arlington.

EUGENE WHITMORE, for the last fifteen years superintendent of the grade school system at Arlington Heights, a Chicago suburb, was killed recently when a train struck his automobile at a railroad crossing.

DR. JOHN ALBERT COUSENS, president of Tufts College since 1920, died suddenly at the age of sixty-two years. Doctor Cousens had been affiliated with the administration of Tufts College almost from the day he was graduated in 1898 and served the institution in various capacities. He became acting president in 1919 succeeding DR. HERMAN CAREY BUMPUS.

JOSEPH H. CORNS, principal of Central High School, Detroit, died of a heart attack recently at his home in Detroit at the age of sixty years.

WILLIAM P. CAMPBELL, eighty-two, believed to have completed the longest teaching career of any California schoolman, died recently three weeks after his retirement. He had taught for sixty years, twenty-two years of which were as principal of the Bret Harte Union High School, Stockton.

GEORGE C. DICKEY, forty-seven, principal of the Fairhaven High School, Fairhaven, Mass., for the last eighteen years, died suddenly at his home.

DR. JOSEPH W. MAUCK, eighty-five years old, president emeritus of Hillsdale College, died recently at Hillsdale, Mich. He was president of the University of South Dakota six years. Resigning, he went to Chicago, where he became vice president in charge of operation for the Chicago and Milwaukee Electric Railway. In 1902, he was called to the presidency of the Hillsdale College.

VISUAL EDUCATION

Opens New Film Center

A new department of visual instruction, handling only 16 mm. motion picture films, has been opened in Los Angeles by the extension division of the University of California. The new department was established in accordance with recent action to create and stock a film center containing 5,000 films for use by southern California schools, serving thirteen southern California counties and the states of Arizona and New Mexico. The Berkeley center serves the northern half of California.

Play School Movies

Seldom do we hear of educational movies being used for children of preschool age. Yet Mrs. Frances Gregalunas, who maintains as a hobby a play school at 2720 East Seventy-Sixth Street, Chicago,

LIGHT WITHOUT GLARE—

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YOUNG EYES need plenty of light. "Tontine" window shades are designed to prevent glare—not to shut out light.

Opaque shades put a strain upon students' eyes by keeping out needed light. When outside distractions or excessive glare require that the schoolroom shades be drawn, you may be sure that, with "Tontine" shades, children's eyes will not be subjected to strain.

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"Tontine" shades are used by the leading universities, private and public schools throughout the United States. Write us for samples and complete information.

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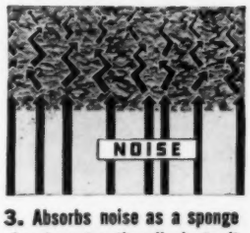
and Have ALL FIVE Essentials of Efficient Acoustical Tile

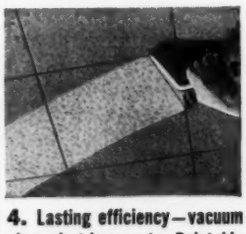
Acoustone-treated ceiling in Peckham Junior High School, Milwaukee—Erected under supervision of Milwaukee Board of School Directors, Architectural Division, G. E. Wiley, Architect.

CHECK THESE 5 ESSENTIALS —YOURS WITH ACOUSTONE

1. Lasting beauty of integral colors. 2. Incombustibility



3. Absorbs noise as a sponge absorbs water - then dissipates it



4. Lasting efficiency—vacuum cleaned at low cost—Paintable

5. High light-reflection cuts cost of lighting

■ Both students and teachers benefit when classrooms, corridors and auditoriums are quieted with Acoustone*, USG *fireproof* acoustical tile. Acoustone diminishes unwanted noise—promotes concentration and the use of full abilities.

Applied overnight to new or old walls or ceilings, Acoustone requires no further decorating. Its travertine-like finish and rich integral colors provide a pleasant and harmonious decoration all their own. Freshness is maintained by simple vacuum cleaning at a fraction of the cost of painting. Yet Acoustone may be painted, without damage to its noise-absorbing ability.

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There's a USG Acoustical Material to Solve every Sound-Control Problem

USG sound-control service includes absorption treatments and materials to clarify hearing and reduce noise—also sound insulation to reduce the travel of objectionable noise from room to room. USG acoustical engineers are always available to assist you in an advisory capacity, without obligating you in any way.

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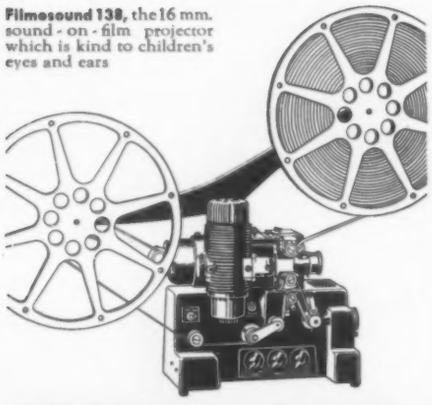

MOTION PICTURES SPEED EDUCATION'S PROGRESS

THE modern educational motion picture is a tool of surpassing effectiveness in broadening youth's horizons . . . in bringing the world into the classroom . . . in adding the realism of personal experience to unfamiliar fields of learning.

But, to be fully effective, motion pictures must be *properly presented.* An inadequate school projector often proves to be a narrow "bottle neck" through which too little can pass.

School projector buyers who recognize the ultimate economy of paying a little more for the finest quality select Bell & Howell Filmo equipment. Made by the manufacturers, since 1907, of Hollywood's preferred professional ciné machinery, Filmo Projectors are the choice not only of school systems long experienced in motion picture instruction, but also of *all* automobile manufacturers who, using hundreds of projectors, preceded their purchases by the most thorough of comparative tests in fully equipped engineering laboratories.

Before you buy, see Filmo demonstrated. Mail the coupon for full information.

B & H Film Library Comprehensive in Scope

As a service to educators, Bell & Howell maintains a library of films . . . sound and silent . . . available on reasonable rental or purchase. High educational value, fine technical quality, and comprehensive choice of subjects characterize this library.

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School.....

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City.....*State*.....

BELL & HOWELL

Films for the School Screen

Biology: II—Plant Life

Life—The story of plant life from the tiny seed to the tall tree. The questions, "Where do plants come from, and how do they grow?" are answered with animated drawings showing germination and the life cycle of a single representative plant. 12 minutes. 16 mm., silent. Herman A. DeVry, Inc., 1111 Center Street, Chicago.

Seed Dispersal—Illustrates methods by which seeds of plants are scattered to ensure the propagation of the species—the wind, transportation by animals and forceful propulsion from the seed case. 1 reel. 16 and 35 mm., sound. For rent and purchase. Erpi Picture Consultants, Inc., 250 West Fifty-Seventh Street, New York City.

Luther Burbank—Showing the late naturalist at work in his garden in Santa Rosa, Calif. 1 reel. 16 mm., sound; 35 mm., silent. For rent. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

In All His Glory—The romantic life of a plant; fertilization; protection of the precious pollen from rain; the drooping snowdrop; the closely shut snapdragon; automatic distribution of pollen; cooperation between plants and insects. 1 reel. 16 mm., sound. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

Roots of Plants—The various forms of plant roots are presented, as well as the functions of the root cap and root hairs. An experiment in osmosis is demonstrated, followed by animation of water absorption by the roots. 1 reel. 16 mm., sound. Ideal Pictures Corporation, 28 East Eighth Street, Chicago.

The Iris Family — From bulb to full bloom, the little known life of the iris is shown. 1 reel. 16 mm., sound. Walter O. Gutlohn, Inc., 35 West Forty-Fifth Street, New York City.

The Dodder—One of the best known of parasitic flowering plants, shown by time-lapse photography. An Erpi production. 1 reel. 16 mm., sound. For rent or purchase. Ideal Pictures Corporation, 28 East Eighth Street, Chicago.

Fungus Plants—Major emphasis is given the various mushrooms whose growth and reproduction are illustrated by time-lapse photography and animation. Economic importance is shown by photography and in the narrative in their use as food, their destruction of dead organic matter and their cause of disease in plants. 1 reel. 16 and 35 mm., sound. Erpi Picture Consultants, Inc., 250 West Fifty-Seventh Street, New York City.

has shown educational movies in the school, and has found from experience that after three showings of one reel, even the tinest baby in the class can grasp some of its significance.

Old Films Evaluated

Fifteen thousand sound film "shorts" lying in the vaults of Hollywood motion picture companies will be evaluated for their educational possibilities and made available to public schools throughout the nation by a committee of eight leading educators appointed by Will H. Hays. The project is sponsored by the Motion Picture Producers and Distributors of America.

Dr. Mark A. May, director of the institute of human relations at Yale University, is chairman of the committee, which includes Frederick H. Baer, superintendent of schools, Bronxville, N. Y.; Isaiah Bowman, president of Johns Hopkins University; Karl T. Compton, president of Massachusetts Institute of Technology; Edmund E. Day, president elect of Cornell University; Royal B. Farnum, executive vice president of the Rhode Island School of Design; Willard E. Givens, executive secretary of the National Education Association, and Jay B. Nash of New York University.

The actual work of making educational evaluations and appraisals of the short subject material is in the hands of a series of five subsidiary groups, working under the advisory committee. Since May 26, when work first began, the members have viewed approximately 1,000 short subjects, placing full approval on certain films, suggesting changes in others and rejecting still others.

Chairmen of the various groups are Prof. Royal B. Farnum, art education; Mrs. Bess B. Lane, New York Ethical Culture School, elementary education; Dr. Paul B. Mann, New York City public schools, biological science and nature study; Prof. Jay B. Nash, New York University, physical education, and Prof. Karl W. Bigelow, Teachers College, Columbia University, social studies.

Film Clearing House

A central clearing house for visual education films is expected to be started by the state department of education in Nevada this fall. The free films will be stored at the capital city and will be lent on request. Schools that have purchased projectors are being urged to buy a few films and to lend them to the central pool to be used by other schools.

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is the time to replace your faded, grey, old blackboard with fresh black **Sterling**

Regrinding or hobbling along with worn out blackboards is false economy. Replace with Sterling and forget your blackboard troubles. Sterling stays fresh and black.

You don't have to wait until every blackboard in your school needs replacement—replace your boards a room or two at a time. But by all means get your program under way.

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Are your classrooms small or inadequately equipped with blackboard space? Then the Webco Swinging Leaf Blackboard and Bulletin Board is your solution.

These handy boards give you 84 square feet of Old Reliable Hyloplate writing surface in light, mobile, but sturdy form. Easy to install and readily accessible they may be simply locked and thus kept under your control.

All in all a fine blackboard that will last for years. Full details will be sent on your request.

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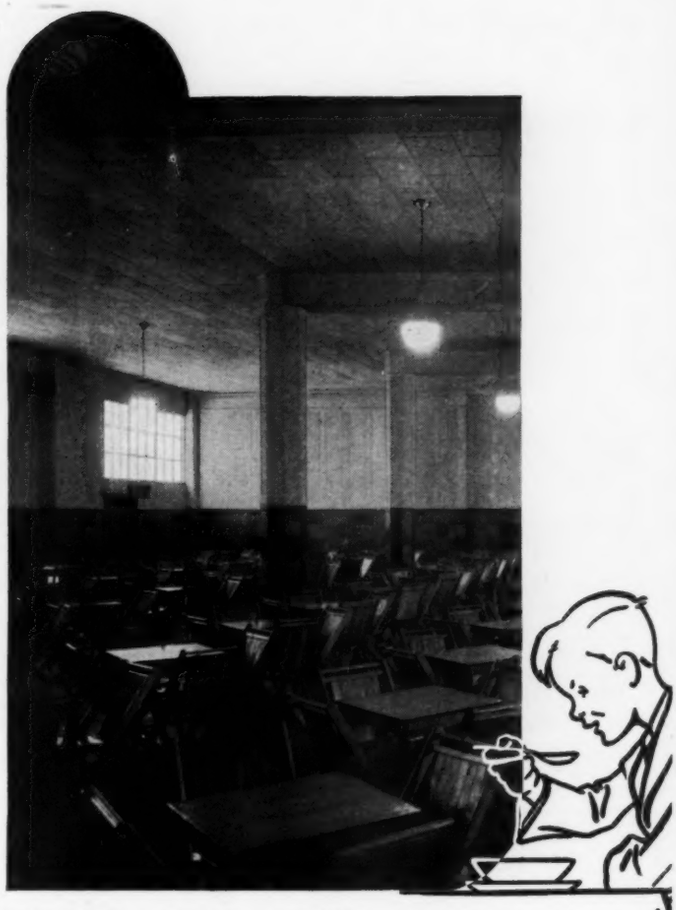

FOOD FOR THE EYES PEACE FOR THE EARS *IN THIS SCHOOL CAFETERIA*

In this school cafeteria Nu-Wood Tile on the ceiling and Nu-Wood Plank on the walls produce an atmosphere of beauty and restful quiet.

You should have seen this school cafeteria just a week ago! Blank, drab, unbeautiful walls . . . bad acoustics that created a nerve-wracking riot of noise whenever the room was used by students.

Now, with softly colored NU-WOOD on the walls and ceilings, the room is good to look at. Now, too, the room is pleasantly quiet, for Nu-Wood *hushes noise* while it beautifies!

There are many parts of your school building in which Nu-Wood is an ideal material. Easily applied, low in cost and permanent, it can solve many problems in classroom, corridors, auditoriums, gymnasiums and school offices. Nu-Wood goes on without interrupting school activities . . . rooms can be completely finished over the week-end or in the evenings. Write us for information about Nu-Wood for schools and for illustrations on Nu-Wood interiors!

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THE growing use of modern schools as community meeting places puts a heavy burden on washing facilities. And focuses attention on the urgent need for better washroom appointments, since they are to be used by both children and adults.

If you're faced with a washroom modernization problem, consider Ivory Soap Dispensers. These modern dispensers provide one of the most generally satisfactory means of assuring clean hands and faces.

The dispenser itself is gracefully designed. And the soap it delivers—pure, gentle, rich lathering Ivory Soap—is one of America's best known, best liked toilet soaps.

You'll be agreeably surprised to learn how little it costs to provide Ivory Dispenser service. First costs are low and operating costs are only a tiny fraction of a cent for each satisfying wash-up. A postcard or letter will bring you a folder which gives further details.

IVORY SOAP DISPENSER

The Ivory Dispenser delivers genuine Ivory Soap in fine, free-flowing flakes or granules. Each is a self-contained soap dispensing unit. Easy to install; easy to refill. Tamper-proof. Delivers a measured amount of Ivory Soap with each push of the plunger. No parts to rust, tarnish or corrode. Low in first cost and in up-keep.

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Each school will in return receive free use of films purchased by other schools in the state. This plan will keep additional films in circulation.

BUILDINGS

Survey Becomes Actuality

One of the first significant survey recommendations to be carried out by the school board of Hartford, Conn., as a result of the study made by Teachers College of Columbia University, is the appropriation of $400,000 for immediate removal of fire hazards and improvement of older district schools. Authorization has been given to raze two old, unsatisfactory buildings.

Results of the survey conducted by the division of field studies of Teachers College have just been published in a volume entitled "Forward to the Fundamentals in Education." This 318-page book represents the work of thirty-six faculty members of Teachers College and sixty-four graduate student field workers who spent a number of months of the 1936-37 school year in its preparation.

Until two years ago Hartford's schools were under the direction of nine separate district boards of education and a high school board which functioned city wide. The survey staff has attempted to interpret the situation for the single school board that has been serving during the last two years. The board of education, the mayor, Supt. Fred Wish, the school staff, the newspaper editors and city officials cooperated with the survey staff in making of the report and in the presentation of the findings to the public.

New London Rebuilds

New London, in the heart of the East Texas oil field, will erect a new $250,000 school building on the site where last spring the lives of 455 pupils were snuffed out by a gas explosion which wrecked the structure. This announcement was made by the school's new superintendent, R. L. Bunting, former director of the demonstration school at the Sam Houston State Teachers College, Huntsville, who said that the new building probably would be ready for occupancy by next spring.

"Lawn Guards"

More than 100 Chicago public schools are entered in the "Save-the-Lawns" campaign sponsored by the park district and civic organizations. James B. McCahey, president of the board of education, is awarding a silver plaque to the school having the finest lawn for the summer, and each school has been asked to select six pupils to act as a "lawn guard" for the summer months.

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A truly modernized School Desk, Royal's experimental child since August, 1933, will be available in the near future.

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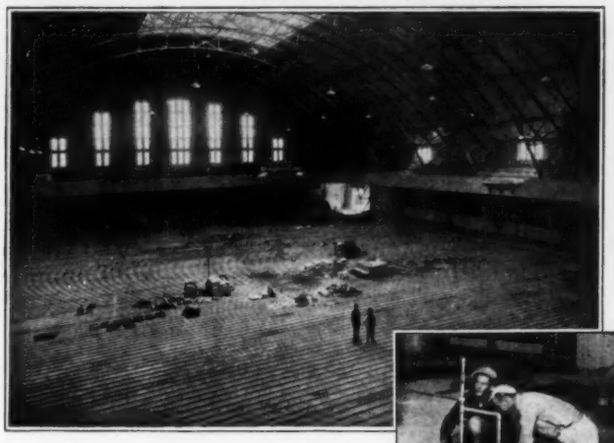

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CONTROLLED READING. *A Correlation of Diagnostic, Teaching, and Corrective Techniques. By Earl A. Taylor. Chicago: The University of Chicago Press,* 1937. *Pp.* xxviii + 367. $3.50.

Evolution of objective diagnostic techniques in reading from the first eye-movement recording camera (1899) of Dodge to the Ophthalm-O-Graph (1935) portable camera.

FUNCTIONAL PLANNING OF ELEMENTARY SCHOOL BUILDINGS. *By Alice Barrows. Bulletin,* 1936, *No.* 19, *Office of Education, U. S. Department of the Interior. Washington, D. C.: Government Printing Office,* 1937. *Pp.* viii + 83. $0.25 *(Paper Cover).*

Best building bulletin ever issued by the Office of Education. Format unusual. Represents research into effect of instructional organization in building.

HARRIET BEECHER STOWE. *By Catherine Gilbertson. New York: D. Appleton-Century Company, Inc.,* 1937. *Pp.* xii + 330. $3.

This definitive biography of a great American preacher, whose "Uncle Tom's Cabin" brought the slavery issue home to millions of readers, attempts to steer a middle course between sentimentality and dubious psychologic analysis.

SOCIETY. *A Textbook of Sociology. By R. M. MacIver. New York: Farrar & Rinehart, Inc.,* 1937. *Pp.* xii + 596. $3.75.

Well balanced and rational treatment that is valuable for general reading as well as for use as a basic text in an introductory course.

LIBRARY TRENDS. *The University of Chicago Studies in Library Science. Edited by Louis R. Wilson. Chicago: The University of Chicago Press,* 1937. *Pp.* xvi + 388. $2.

Papers presented before the Library Institute at the University of Chicago, Aug. 3 to 15, 1936. Stresses the library as a dynamic social institution.

THE WOODROW WILSONS. *By Eleanor Wilson McAdoo, in Collaboration With Margaret Y. Gaffey. New York: The Macmillan Company,* 1937. *Pp.* x + 301. $3.50.

The great war president portrayed sympathetically as a very human person by his daughter. Delightful and simple narrative of the human (family) aspect of a great career. Well worth reading.

SICKNESS AND INSURANCE. *By Harry Alvin Millis. Chicago: The University of Chicago Press,* 1937. *Pp.* ix + 166. $2.

An authoritative and complete study of sickness and health insurance.

FUNCTIONAL COLOR. *By Faber Birren. New York: The Crimson Press,* 1937. *Pp.* 118. $2.

Considers problems of legibility, visibility, the promotion of safety and the speeding up of efficiency in industry. Logical rather than temperamental methods of color selection are advised. Primarily of interest to artists, designers, architects and interior decorators, this compilation of practical facts about color is very readable and not too technical for the art pupil in high school or junior college.

ROLLING ALONG IN SONG. *Edited and Arranged by J. Rosamond Johnson. New York: The Viking Press,* 1937. *Pp.* 224. $3.50.

No school library will be complete without this third volume of eighty-seven Negro songs. It is a companion to the two preceding books of spirituals. This collection includes ring shouts, spirituals, work songs, plantation ballads, chain-gang, jail-house, minstrels, street songs and blues.

FUNCTIONS OF SECONDARY EDUCATION. *Report of the Committee on the Orientation of Secondary Education, Department of Secondary School Principals, N. E. A. Bulletin No.* 64, *January,* 1937. *Washington: National Educational Association,* 1937. *Pp.* 266. $1.10.

A report that may or may not have a big influence on secondary education in the United States. There is much meat for warm discussion. Some may question definitions and others will reject conclusions. It should be widely read.

THE FIFTH YEARBOOK OF SCHOOL LAW. *Edited by M. M. Chambers. Washington, D. C.: American Council on Education,* 1937. *Pp.* 144. $1. *(Paper Cover).*

More complete than previous editions, the 1937 Yearbook of School Law is a welcome addition to current literature. Includes also a good bibliography of research studies since 1918. Invaluable for superintendents as well as institutional libraries. Conveniently arranged for reference work.

EDUCATIONAL OPPORTUNITIES IN MISSOURI HIGH SCHOOLS. *By Byron Lee Westfall. Columbia, Mo.: Published by the Graduate School of the University of Missouri,* 1937. *Pp.* x + 190. $1.60.

Descriptive study of conditions existing in secondary schools of various sizes; shows significant differences in quality and extent of service between small and large elementary schools.

THE NEW SOVIET CONSTITUTION: A STUDY IN SOCIALIST DEMOCRACY. *By Anna Louise Strong. New York: Henry Holt and Company, Inc.,* 1937. *Pp.* viii + 169. $1.50.

Excellent interpretation of the much discussed soviet's third constitution. This unusual political document has brought forth some unusual legal social concepts. Certainly much worth reading.

THE AMERICAN SCHOOL AND UNIVERSITY. *Ninth Annual Edition. New York: American School Publishing Corp.,* 1937. *Pp.* 599.

This welcome annual makes its 1937 bow in new format and size, enabling more effective presentation of building plans and construction detail.

Just Off the Press

MR. PUMPS, THE POPSICLE MAN. *By Eleanore Hubbard Wilson. Illustrated by the author. New York: E. P. Dutton & Co., Inc.,* 1937. $1.

SCARLET FEVER. *By Ethel B. Perry. Chicago: American Medical Association,* 1937. *Pp.* 10. $0.10 *(Paper Cover).*

MEASLES. *By Ethel B. Perry. Chicago: American Medical Association,* 1937. *Pp.* 8. $0.10 *(Paper Cover).*

CATTLE'S CONTRIBUTION TO MANKIND. *By J. Arthur Myers. Reprinted from* HYGEIA, *April and May,* 1937, *issue. Chicago: American Medical Association,* 1937. $0.10.

BEFORE WE READ. *By William S. Gray and Marion Monroe. Illustrated. Chicago: Scott, Foresman and Company,* 1937. *Pp.* 49. $0.32 *(Paper Cover).*

THE NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS. *Twelfth Yearbook. By Aaron Bakst. New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* xvi + 287. $1.75.

OUR STATE FLAGS. *By Frances Carpenter. Boston: Bruce Humphries, Inc.,* 1937. *Pp.* 54. $0.25 *(Paper Cover).*

THE NEW APPLIED MATHEMATICS. *Revised Edition. By Sidney J. Lasley and Myrtle F. Mudd. New York: Prentice-Hall, Inc.,* 1937. *Pp.* xxiii + 544. $1.60.

NEW TECHNIQUES IN SOCIAL SCIENCE TEACHING. *A Case Book. By Vernon B. Hampton. Stapleton, N. Y.: The John Willig Press, Inc.,* 1937. *Pp.* 311. $2.75.

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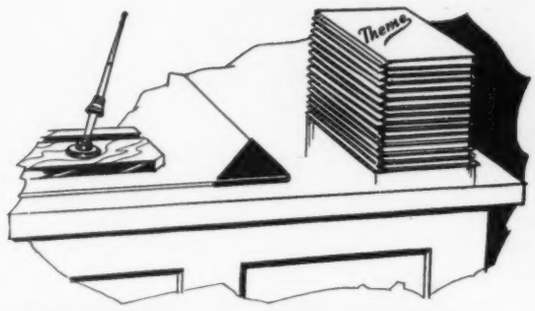

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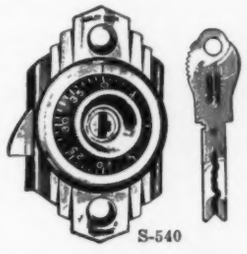

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NOTES FOR BUYERS • • •

Tailor-Made Weather

That good old saw about letting nature take its course is becoming more and more outmoded. For too many years homo, not so sapiens, struggled along with nature's way of handling the weather before it dawned upon him that maybe he could improve on it. And so he's gone and done it.

Notable among weather improvers, the Trane Company, LaCrosse, Wis., calls its manipulation of atmospheric conditions "Weather Magic." Weather Magic, be it said, is controlled, custom-made weather that is as warm or cool, dry or moist as personal comfort or specific conditions demand.

Almost all applications of air conditioning are necessarily built to suit individual needs. There are as many technical problems as there are conditions in the building to be served owing to its existing shape, size and available equipment. Further, the special requirements of the owners or special requirements for the users of the building make additional demands.

In other words, complete air conditioning deals with the directed use of the professions of heating, cooling, ventilating, humidification and dehumidification. For further details, see Trane.

Scene: Any Classroom

Johnny clanked up the aisle again to sharpen his pencil for the sixth time that afternoon. Object: To walk on that creaking board in the floor, attract attention and irritate the teacher. Result: Johnny went scurrying back to his seat frightened by a sharp reprimand, and the Mrs. Grundys broadcast it about at the P.-T.A. that Miss So-and-So who used to be so-o-sweet to the younger children was getting old maidish.

The foregoing incident need never have happened had the floors been securely nailed in place to sleepers that appear to be precast of concrete. This is one of the building specialties produced by the National Kellastone Company, 405 Lexington Avenue, New York City, and has the property of holding nails or screws even more securely than does wood. After ten years of successful installations in hundreds of buildings, the product is now made generally available through national sales distribution.

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Calling all superintendents:

Be on the lookout for Sunco Soundmaster, a reenforcing amplifier system with 2,400 times more audio power than the human voice; in case, 13½ by 13½ by 9 inches deep; equipped with a 12-inch 15-watt speaker; operates directly from 110 volt 50 to 60 cycle lines and by batteries; powerful enough for audiences up to 3,000 and outdoor areas up to 25,000 square feet.

Report all inquiries to Sundt Engineering Company, 4238 Lincoln Avenue, Chicago.

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A traffic light inside a classroom may sound jabberwockian, but in reality it is one of the sanest innovations we have seen in many a day.

We wouldn't want to mislead you into thinking it is "life" size, for it isn't. It's only 3 feet high and weighs 6 pounds —a miniature replica of a street traffic light. It may be attached to a 100-volt current outlet by a 9-foot rubber cord

South Lake High School, St. Clair Shores, Mich. Geo. J. Haas—Architect.

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Fenestra Steel Windows also harmonize with any type of architecture. Slender steel frames and muntins lend an air of dignity and strength and are non-inflammable.

Cost-conscious school boards appreciate the many economies that Fenestra Windows offer both in installation cost and in maintenance. For further details, write Detroit Steel Products Company, 2255 East Grand Boulevard, Detroit, Michigan.

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The high quality and durability that have made A-S-E lockers famous are also characteristics of —A-S-E Steel Storage and Wardrobe Cabinets, Vertical Files, Patrician Book Shelving, Wall-Robes.

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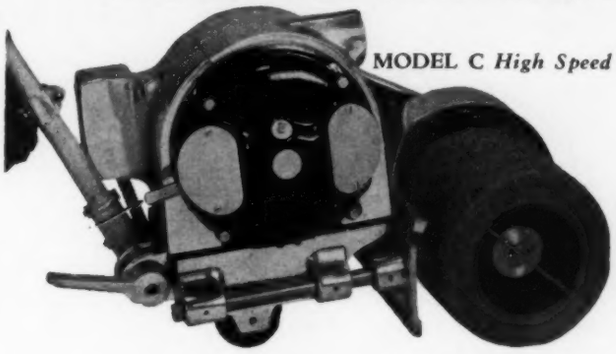

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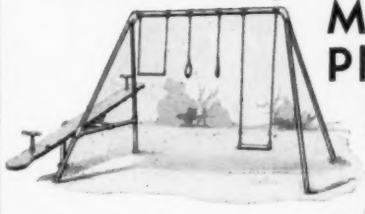

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attachment. When an electric outlet is not available, a special battery attachment is furnished at a small additional cost.

The name of this special device is the Babb Portable Traflite, and it may be obtained from Edward E. Babb and Company, Inc., 910 Commonwealth Avenue, Boston.

Melody or Malady

Nothing roars and screeches like an elevated train except a school cafeteria on a rainy day. While storms drench the playground, pupils linger over the lunch tables, their voices rising sharply over the clatter of dishes and trays.

Comes Johns-Manville to remind us that there is no longer excuse for excessive noise in either old or new buildings. Recent scientific experiments have shown that quieting a worker's surroundings saves 19 per cent of his energy, increases his accuracy in tests involving delayed memory 8 per cent and involving immediate memory 15 per cent, and causes definite increases in speed and accuracy in solving mental problems.

Noise makes pupils in many schools 40 per cent deaf, says Johns Manville. What may be a melody in the music room becomes a malady in the geometry class. How to eliminate noise and to correct acoustics are stories this company enjoys telling. The newly published "Sound Control for Schools and Universities" may be obtained by writing 22 East 40th Street, New York.

Chemists' Paradise

In almost every school chemistry laboratory there is at least one practical joker whose perverted sense of humor impels him to turn loose on his unsuspecting companions the more odoriferous gases, hydrogen sulphide, for choice. At such trying moments, the fume hood, designed to remove said gases with speed and dispatch, comes into its own. Blessings, therefore, on the man who invented fume hoods.

The Mathews individual hoods, presented in the new Leonard Peterson catalogue, represents a new and effective laboratory hood construction. It utilizes the principle of a high velocity flow through a narrow slot. Currents are so generated with the help of the canopy that, with as low as 150 cubic feet of air per minute, the hood is exceptionally effective in removing both heavy and light gases.

Of course, fume hoods are only one of many items of laboratory furniture which Leonard Peterson and Company, 1222 Fullerton Avenue, Chicago, are prepared to offer to interested parties. There are, among other things, biology tables, physics tables, instructors' desks, cabinets, supply and apparatus cases, complete with all appurtenances thereto. The chemist who dreams of the ideal laboratory fitted up just as he wants it would have a field day poring over this catalogue.

Kindness to Floors

Consider the floor in its downtrodden state; consider it well before it's too late. Sorry, we didn't mean to go poetic on you, but we are just passing on the warning of those inspired floor preservers, the Vestal Chemical Laboratories of St. Louis. Say they, with twenty-five years of experience to back them up, no part of any building gets so much rough usage as the floors, and serious thought, therefore, should be given to their proper treatment and care. Recommended by Vestal as excellent are sundry floor seals, cleaning materials and waxes described in their new catalogue, which they will send you with practically no urging.

In addition to adequate care of floors, the catalogue brings to the attention of its readers the importance of sanitary soap service in public or semipublic washrooms. Vestal liquid soap dispensed from closed containers, of their own manufacture, is, they aver, both sanitary and economical. On the whole, we think you would be interested in investigating the Vestal booklet yourself.

Flunked Out

Expel the old drinking fountain!

We were astounded, so the superintendent explained. The water supply for his modern school building must pass a rigid test. Unless it can furnish evidence of absolutely sanitary drinking water flowing at controlled temperatures it is flunked out. Nothing less will safeguard the school child's efficiency, comfort and health.

Two improvements in 1937 water cooler construction, he pointed out, make water contamination impossible. The "bubbler" of one new cooler is so constructed as to prevent all contact between mouth and nozzle, and the drain has been grilled to prevent water splashing back under the guard device.

So it came about that an old type of fountain was banished forever from this modern school plant, and a new Kelvinator water cooler installed, from the Nash-Kelvinator Corporation of Detroit.

One Less Worry

This summer while the school administrator is holding a fishing rod with one hand, he is likely to be scratching his head with the other whilst he worries about how to stretch the school's fuel dollar for the coming year.

We would refer this troubled gentleman to school and industrial plants using Brown electric meters for indicating and recording carbon dioxide in fuels. Since in all except gaseous fuels, carbon constitutes 80 per cent or more of the combustible components, burning all of the carbon in the fuel is the first essential toward furnace-firing efficiency.

Representatives of the Brown Instrument Company, the manufacturers, a division of the Minneapolis-Honeywell Regulator Company, would be able to show the administrator how he might save a full 15 per cent on fuel cost through their CO_2 meters, which enable the furnace operator to estimate continuously the extent of chimney loss. No one can tell by looking at a chimney top how much heat is passing through it or losses due to unburned gases. Brown's offices may be found in all large cities.

One-Act Play

"Tonight at 8:30"—A tragi-comedy, not by Noel Coward. Scene I—School Auditorium, January, 1936. A mob of parents, pupils, principal and teachers swear vengeance on the school engineer.

Principal: Nicolas, can't you get up more steam? Our guests are numb with cold, even with their fur coats on. As for the girls in the play in those light fairy costumes, they'll probably perish with pneumonia.

Nicolas: I shovel fast every minute I get. But it is "Nick, set up the chairs," "Nick, run for a new lantern fuse," "Nick, put a brace on this piece of scenery." I can't be everywhere, can I? It's below zero tonight. If I am to get this big hall comfortable, I got to keep shoveling, shoveling, shoveling till I drop.

Scene II—Same. January, 1937. Parents, pupils, principal and teachers in gayer mood.

Parent: Remember a year ago how we froze fast to our seats in this spot. Never again for me, I said. But I had to see Joey perform so here I am. Cold night out, but it's been as comfortable as you please in here all evening.

Principal: Yes, and good old Nick here has been on the run every minute all day. He's hardly had time to look at his boilers. The fact is that they need little attention. After last year's performance when we froze you all out, we decided not to put off buying a couple of Detroit stokers* any longer. Now Nicolas can get up steam in no time. As for the winter's coal bill, it looks as if those stokers would save us from 30 to 40 per cent.

Chorus of Villagers: Good old Nick. Good new stokers. Good performance. Good night.

*Detroit Stoker Company, General Motors Building, Detroit.

LOOKING FORWARD

Venereal Diseases

THE public schools cannot ignore the plans of the federal government to bring one of the last great disease scourges — the venereal group — under control through education of the general public and to bring the children to a realization of their true nature, incidence, devastating effects and methods of prevention.

The taboo of silence and false modesty must be lifted. There may have been a reason for silence when grandfather was a boy because medical science could not cope with either of these twin destroyers — syphilis and gonorrhea — but that time has fortunately passed and there is no occasion today for a newborn child to be afflicted and handicapped throughout life. Neither is there any longer occasion for those adults infected with the germ of either disease to hide in the dark or to suffer from either neglect or quackery. Human resources are much too valuable to permit false attitudes to stand in the path of sensible treatment and possible eradication.

The campaign waged by Surgeon General Thomas Parran and thousands of associates in the medical and health field is a most sensible one. It deserves the wholehearted support of every physician, health officer and teacher.

Unfortunately it is not possible to provide for instruction in these diseases in the classrooms until a supporting adult public opinion has been created in the community. The school's first job is to create a sufficient cushion of community support to make child instruction in venereal disease institutionally tenable. The parent-teacher association program offers a splendid opportunity to make a start. Certain time may be allocated during the ensuing year for a serious study of the problem. The backlog of initiative has already been created through the efforts of the federal government, the magazines and newspapers. Recommendations for adult programs carried on in cooperation with the school are not so radical a suggestion as they would have been two years ago. The government is willing to supply suitable textual material.

If a favorable adult set toward the teaching of causes, effects and possible means of eradication of both syphilis and gonorrhea is developed during the current year, it will be safely possible to introduce direct teaching into the secondary school health programs a year hence. Under current conditions a year of adult education in most communities should be sufficient.

There is no time to be lost. The government has prepared the way and the school can cooperate in this great campaign with a wholeheartedness not possible earlier.

War Propaganda

THIS is written as a deep and serious warning for the teaching profession upon which certain propagandistic demands will soon be made.

The nations of the world present all of the appearances of having perverted their economic life from its true function to support ever increasing armament programs in preparation for war. In the Far East under the guise of a kindly but firm paternal discipline for a careless and frequently unappreciative child, Japan has been ingeniously carrying on a progressive war against China for years, biting off sizeable portions of territory, organizing each chunk carefully and then reaching for more. In Spain for more than a year two major factions have been carrying on a most destructive civil war encouraged, aided and directly abetted by Italy, Germany, France and more cautiously by England.

Italy, Germany and Russia are huge armed camps whose terrific armaments are designed solely for "self-defense." The naïveté of national spokesmen and national propaganda is enough to cause a deep equine snicker were not the situation so serious. No one ever built armaments like these for parade ground and deep sea exercise. Two and possibly three of the dangerous madmen who govern Europe's totalitarian states are planning to go somewhere whenever they feel that such travel will be safest for them. Italy broke the ice by absorbing Ethiopia and the success of the Franco revolt in Spain means at least the end of the economic independence of Spain since promises to Germany and to Italy point to the complete exploitation of the Iberian resources to further their wills to power. Only a few weeks ago a poll by the Institute of Public Opinion

indicated that 44 per cent of the American people according to the cross section sampled believed that the United States could not remain aloof from the next war.

The United States is in a more delicate position than in 1914 and it is doubtful whether the lessons learned from our last attempt at altruistic interference in the European struggle, including even the realistic defaulting of our former dear Allies on money lent them for reconstruction, are going to be sufficient to keep this nation disinterested. The country is already overrun with German, French, English, Italian, Japanese, Chinese, Russian and Spanish propaganda. Each national group is attempting subtly to influence American public opinion toward a favorable attitude. Much of this propaganda is so cunningly veiled that its real purpose is not immediately apparent. The first approach is through sympathy.

During the coming year the schools will be subjected to the mounting pressure from foreign propaganda that will operate similarly to that of 1914. Everyone remembers the starving Belgian babies who finally brought Herbert Hoover to the presidency; the poisoned candy and grenades left by the Germans in the trenches so that little children were poisoned (no one ever tried to explain why little children were wandering around the trenches), the butchered Belgian women and the great mass of atrocity stories later admitted to be entirely false.

This fall an apparently innocent appeal will be made for "medical aid to Spanish sufferers." Nurses and doctors will appear on platforms and wring the hearts of audiences with stories of Spanish suffering. Sums will be collected, supplies purchased and sent, idealistic and adventurous young men and doctors will volunteer for service in Spain and the big future emotional snowball will be started on its way. Professors, teachers, doctors and congenital sympathizers are prone to respond quickly to humanitarian needs.

At a number of Spanish "aid" meetings held this summer, when questions were asked concerning the need for neutral attitudes, and why an international agency like the Red Cross could not bear the responsibility for general aid to sufferers on both sides, the questioners were rudely silenced or not invited to further meetings for "medical aid." It has been fairly well established that the movement was started by agencies close to the official consular service. The "medical aid" movement has all of the earmarks of sweet propaganda to develop sympathy and ultimately involvement.

Teachers and administrators need to take especial pains during the year to keep the schools free from tempting foreign propaganda. It is not too early to point some of the work in English and social studies courses to a comprehensive study of propaganda, its purpose and its possibilities and to use these appraisals as means of weighing and checking most critically anything that has the slightest tendency toward our involvement. Now is the time to think clearly and to act so that several years from now the United States will not be forced into a position in which participation in some war becomes almost essential. Teachers of foreign languages need to be especially cautioned against allowing their cultural sympathies to be used by realistic foreign propagandists as happened to so many French and German teachers in 1914. It is well to avoid sponsorship of apparently innocent foreign speakers who wish to tell about the beauties of their cultural aspirations and at the same time prove conclusively the righteousness of their expansion programs. The possibility of a few foreign decorations or free vacation trips may well be subordinated to the welfare of the country as a whole.

The situation demands serious thought on the part of all public school teachers.

The United States can remain free from participation in the devastating and destructive world war that is apparently just over the horizon. American trade may be quickly diverted from the dangerous sector of nations at war to nations not at war. Trade with neutrals is entirely possible and offers an intelligent opportunity to keep clear of danger and destruction. There is no danger that the United States will be invaded since our defense forces are perfectly adequate to maintain our borders intact. There is extreme danger of involvement through the stimulation of war trading and the creation of excessive sympathy through smooth propaganda.

The Bookmen

THE robin may be a sign of spring, but the bookman is just as surely a harbinger of fall. Just as soon as the excitement incidental to the opening of the new term has died down, the small town superintendent and his associates feel the need for news. They want to know what is going on in the outside educational world, to receive real intimate news from other towns, of politics, of how this and that is going in a neighboring county or state. This craving is not satisfied by the morning newspaper or the first issues of the state professional journals; the news they want seldom, if ever, gets into print.

Then comes the bookman on one of his regular periodic visits and a pleasant time is had by all. In the office, or more comfortably over a lunch table, the executive and his companion swap stories and the "inside dope" passes between them. Although there is a technical presumption that the bookman is supposed to be selling textbooks one would seldom guess it from the early conversation. It seems more like a meeting of old friends. It generally takes a long time even to mention books.

Bob follows Chester and Chester is succeeded by Harry and Paul, until all of the companies have passed

through the district each sketching a broad outlook on educational and world affairs and taking something in turn from each community to digest and pass on to the rest. The textbook is a vital tool and the educator is generally glad to see the men who sell them. Their mission is taken for granted but their services are not confined merely to dispensing textbooks. Many a small town would be almost completely isolated from fresh educational news in the winter were it not for these traveling optimists who are not deterred by wind or weather.

Selling textbooks is a technique all of its own. It takes time. Efficiency engineers would probably go insane watching some of these masters work at their own game. Once in a blue moon a high-pressure salesman appears by accident in the textbook game but he doesn't last long. Either he learns quickly that his wares are not of a type than can be sold by a twenty-minute "pep" talk which automatically results in a signature above the dotted line and changes his program accordingly, or else he soon seeks other fields. It takes a long time to sell textbooks. Teachers, principals and superintendents all require time for examination and careful appraisal. Some few progressives even use the experimental method and try our new publications under classroom conditions. The books that are talked about this fall will probably not appear in the order books until a year or more later. In the meantime there are friendly relations to be maintained, changing field needs to be studied, and a wary eye kept on one's books already in service.

The bookman has both background and color. Most of them have found their way into selling from the classroom or the executive's office. They know the schools and the teaching profession thoroughly. They have found that friendliness is a much better technique than pressure and statistics. To many of the schoolmen some of the most heavily advertised authors are merely names without much meaning. All companies are producing unusually good textual material and in many cases there is little real choice between the A and B arithmetics or the green and blue geographies. However, this generalization will not be officially believed by the official dispensers.

Friendliness to a bookman goes much deeper than mere good fellowship and a gusty story. They study carefully the men to whom they sell and more frequently than many schoolmen are aware promotion comes to them because a bookman has told a board member or a friend in some other place what a likely boy Jones at Webbville is and what a fine job he is doing there.

The other outstanding characteristic is their optimism. During the darkest days of the depression when it required real skill to get the proverbial overcoat in the expense account they never lost faith. Their contagious enthusiasm kept many a disheartened superintendent at work in greater hope of better times.

The bookmen are the troubadours of education and the schools would be much less colorful without them. Long may they drive and prosper and see the fulfillment of their bookish dreams — every school equipped with clean textbooks, at least one for each member of the entire school population, and all of them bearing their own publishing imprint.

Sane Precautions

THE official investigation indicated among other things that the New London (Texas) tragedy in which 426 children lost their lives was due in part to repairs and unauthorized careless connections of the gas feed pipes made by building custodians. To prevent repetition of this carelessness a bill has been introduced into the Texas legislature that will regulate the installation of plumbing and gas piping by restricting such repairs to competent craftsmen. Thus one of the factors of carelessness directly responsible for the unnecessary deaths of nearly half a thousand children is to be eliminated in the future. This bill represents a most desirable precaution for safeguarding the lives of other children. Texas still needs a much stiffer inspection code for school buildings and more authority under competent specialists to safeguard decentralized heating plant installations.

Safe Living

THE public schools are expected to do their share in the teaching of practices that will make for safer living. While major emphasis this year will be focussed upon reducing automobile fatalities, there are many other significant aspects of the problem that should not be neglected. These include careful inspection of the physical plant to reduce possible hazards in the use of school buildings, care in preventing accidents in school shops, laboratories, gymnasiums and playgrounds, and cooperation with other agencies in reducing all possible hazards in coming to and going home from school.

The American Automobile Association (Washington, D. C.) is devoting a major part of its educational program to reducing automobile accidents and is seeking the cooperation of the public schools. To assist in the preparation of materials and educational organization, the association has obtained the services of Dr. F. R. Noffsinger as educational director. This appointment is assurance of the earnestness and competence of the plans. Teaching material will be furnished to schools upon request. It seems desirable that the schools avail themselves of this opportunity.

The Editor

Making Tests Effective

By JOHN L. STENQUIST

THIS year more than 250,000 tests were used in the Baltimore public schools. Since similar programs have been in effect since 1927, upwards of two and a half million tests have been given during the last ten years.

These are huge numbers. To all who are familiar with the detailed labor involved in the preparation and giving of even a single test, it immediately raises the question, "How is it done?" The answer is hidden in a single idea: coordinated effort.

We have found that the effective use of tests is a collective enterprise involving a high degree of cooperation on the part of pupils, teachers, principals, supervisors, directors and superintendents. Tests are admittedly valuable. The problem has always been how to carry out effectively the testing programs with the facilities at our disposal. There is ample evidence that little good comes from the use of tests given indiscriminately without adequate plans and intelligent follow-up. That systematic citywide tests recurring each term can be made of outstanding cumulative value has been demonstrated in the Baltimore schools.

The testing program is directed by the bureau of research, a division comprised at present of seven in-

dividuals only. This limited staff could not by itself independently carry on 1 per cent of our present program. Results are made possible through a highly organized teaching force.

The programs are now carried out with almost the precision of clockwork. The work is so distributed that every teacher, while taking part in the program as a whole, concentrates chiefly on the work for her own class. Teachers, principals, administrative officers and the bureau all play their parts.

Testing is done semiannually in each school. This has been accomplished in the elementary schools through a plan of organization in which one teacher in each school acts as local primary examiner and one as local intermediate examiner. These teachers have been trained by the bureau of research in the precise techniques of the particular tests that are used. Although they are not psychologists, these teachers have demonstrated that they are as capable of administering many of the tests suitable in the circumstances as are trained psychologists. In the secondary schools survey testing is conducted through vocational counselors working in cooperation with principals, department heads and teachers.

Citywide Survey Possible

These persons become a key to systematic testing. With this organization citywide surveys become possible, with a minimum of disruption to school programs. A feature of our plan is the devising of means for utilizing as far as possible every member of the school system. This permits each person to contribute a limited service which he can give effectively, with a minimum interference with his other duties, and in such a way that for him there is value received. Central in the whole undertaking has been the perfecting of mechanical devices and systems capable of converting technical labor by teachers into routine mechanical work that can be handled by machines, clerks, messengers and laborers.

While the keynote in our plan is emphasis on organization and mechanization, the base on which the whole program rests is the educational philosophy that governs the conduct of the school system. This philosophy is determined predominantly by the superintendent of schools. In the last analysis the effectiveness of a testing program will depend on him. If he understands the value of tests for improving educational practices and has the interest to put pressure behind their development and use, an effective testing program will result; but not otherwise. If his interest is sufficient he will surround himself with personnel and means for carrying out his program. Testing programs involve too much hard work and drudgery to bloom spontaneously. The superintendent who really wants to make use of tests will take whatever steps are necessary to provide for their use. In the larger school systems this has resulted in research bureaus. In the smaller school systems the function of a bureau easily may be carried out by a single person.

It is through follow-up work that the Baltimore schools are able to test the value of their testing program and to discover educational facts that point the way to better teaching practices and more effective supervision.

The novelty of the modern test has long since passed. It has now become one of the tools of teaching. Like other devices, its usefulness is largely conditioned by the user. While virtually indispensable in the operation of a school, the test is one of our sharpest instruments with potentialities as yet not fully capitalized. For to test is to measure and to measure is to translate the unknown into the known. This is the *sine qua non* in the advance of every science and art. Regardless of whether our examinations yield accurate or preposterous measurements, the significance of the function of measurement is of utmost importance for it is only to the extent that we are able to appraise achievement that achievement can be intelligently modified.

We have found that appropriate tests can serve as a powerful direct and indirect force in the mastery of subject matter. Finally, mastery of the subjects of the curriculum constitutes the business of the schools, for it is in this process that the total educational development takes place. It is for this purpose that schools are maintained. The efficiency of a school or a school system cannot be judged by off-hand impression and surface appearances. Goodness or badness of educational practices cannot be determined on the basis of preconceived notions. Accurate data, scientific evidence and measured results, wherever obtainable, are required by all competent persons who would attempt to judge the efficiency of a school. As yet no device has appeared that can better reveal directly or indirectly as many significant educational facts as the modern test.

United Effort Gives Results

Unless teachers, principals, supervisors, directors and superintendents all are a part of the total testing program, its fruits are not likely to be great. We have found that it is united effort that counts. Hence, in our programs primary stress has been placed on including teachers and principals in our plans. Tests are not imposed from above but rather developed from below. To be sure, long range planning is the responsibility of the board of superintendents, but the teacher's problem is the keynote in determining programs. Tests lose their chief value if they are suspected of being held as clubs over the heads of teachers.

The ideal test is the one that is asked for by the teacher as a help in the performance of her task of teaching. For this reason virtually all our tests are given at the beginning of each term rather than at the end, thus giving a diagnosis of the status of the new class to the new teacher.

The value of any testing program is determined by the follow-up. It is the use that is made of the results that yields the dividends. The semiannual survey through citywide test results presents a golden opportunity

for the superintendent and his staff to note and to stress repeatedly the lessons that the tests teach.

The needs of reform can nowhere better be brought home than at mass meetings of principals and executives in which findings of tests are presented and discussed. Stereopticon slides, showing graphically the educational picture that tests reveal for class after class, are made a dynamic means of driving home many items — issues that involve continuous improvements in instruction, organization, supervision and administration.

These occasions give rise to valuable discussions. What to do for the child who stands high in one subject and low in another, what pupils should be reclassified, how teachers can be helped — these and a hundred other vital problems are discussed when the educational pictures of typical classes as revealed by the tests that are flashed on the screen. In the individual school the principal with all teachers assembled conducts similar meetings — studying the test results with the faculty as a whole and individually, pointing out steps that can be taken, whether it is the promotion or transfer of a pupil, special grouping, revision of methods or other action. Here the individual teacher plays the stellar rôle. By our method of conducting the tests she is the first to have the entire picture of the status of her class, and she immediately formulates plans for appropriate action. Skillful teachers are well on the way toward remedial measures long before meetings occur.

This follow-up activity in all its ramifications is the fruit of the entire matter, yet it is the spot that too often is neglected. Since it is the essence of the whole program, its influence in our case has permeated every nook and cranny of our school system. This is merely another way of saying that if an adequate body of facts is presented repeatedly and forcefully to the educational staff, the evidence revealed gradually influences the thinking of the entire personnel. The result has been a realization of the extent and significance of individual differences among pupils, teachers and schools. This in turn has led to many changes. Such results come from a continuous,

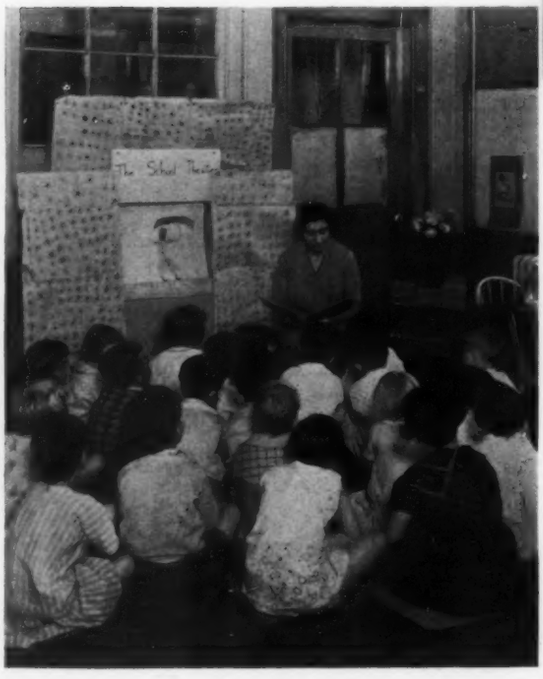
Take a peek into this second grade classroom in a Baltimore summer school. Individual differences are recognized from the beginning. Baltimore also finds that tests help to discover the pupils who will become the scientists of tomorrow (right).

sustained program that carries over a period of years, an outcome not possible when testing is sporadic and follow-up is indifferent.

Thus our testing program has become a powerful instrument that vividly reveals many facts, throwing light on myriads of problems and pupils. It opens up continually the challenge to better teaching and to better administration. Used in this way tests become, in the hands of the superintendent, a powerful tool by which great forces within the school system may be brought to bear in the promotion of his policies.

The educational power latent within 250,000 annual tests has, as yet, been only partially realized. There is no more effective educational force at the superintendent's command. It is one of the longest levers in the educational machine. Through its proper use the modern superintendent can profoundly influence educational practices. But the realization of this goal is dependent upon the quality of skill and leadership that is behind the testing program.

Results obtainable are directly dependent upon another basic factor: the quality of the tests employed. Until we can distinguish a good test from a poor test no great results can be obtained, no matter how skillful may be the school administrator.



We are seven. Proper classification and test-determined instruction begin in the primary grades. Group instruction, pictured at the left, is also based largely on test results. The educational power latent within 250,000 annual tests has been only partially realized in Baltimore up to the present.

For fun rather than for the glory of the school—that should be the goal of girls' athletics. The adults in the community are usually responsible for cultivation of the competitive attitude.

Win or Lose—But Play!

By ETHEL PERRIN

ATHLETICS for girls are an important part of any program of physical education planned to fit present day conditions of living. Fortunately, into our physical education programs has come the spirit of play to replace tiresome methods of gymnastics.

In the case of high school girls particularly, parents may well be concerned that too frequently the spirit of play is overshadowed by interschool competition. The tendency is to place too much emphasis on the importance of winning or losing.

This competitive attitude is usually brought about by adults in the community (often represented by the press) who have nothing to do with the physical education program as a whole. To them the glory of the school or of the town, or else the size of gate receipts, is of greater importance than the development of the girls who are playing the game. There is much discussion at present of the value of interschool competitive games for girls. This is not because girls from one school should not play games with girls from another school, but because such games, in many places, have been poorly conducted.

It is easy to overstimulate an interest in a winning team, to the detriment of the health and general welfare of the girls. Because of this, in many localities all interschool games for girls have been abolished. In others a new type of interschool program, with more socialized value, has been substituted.

This is sometimes called a sports day and, instead of two picked teams being surrounded by an admiring, inactive throng, there are as many teams in active play as space permits. Sometimes the teams are made up of members of one school, and sometimes they are formed from a mixture of schools. All sorts of games are played, each one for the fun there is in it rather than for the glory of the school. One of the chief values of such sports days is the leadership and responsibility they develop; the girls are the managers and officials, for the matter of winning and losing is not of sufficient importance to require paid referees and umpires.

One of the planks in the platform of the women's division of the National Amateur Athletic Association, an organization to promote athletics for girls and women, reads as follows: "Promote competition that stresses enjoyment of sport and the development of good sportsmanship and character rather than those types that emphasize the making and breaking of records and the winning of championships for the enjoyment of spectators or for the athletic reputation or commercial advantage of institutions and organizations."

In the light of this statement, compare the old type of interschool competition with the new.

One other plank in this platform is of special interest to parents: "Protect the health of girls and women through the promotion of medical examinations and medical follow-up as a basis for participation in athletic competition, and of a system of supervision that shall assure a reasonable and sane attitude toward participation in activities at times of temporary physical unfitness."

Closely connected with this is the recommendation for the employment of women administrators, leaders and officials who are qualified to assume full responsibility for the physical education and recreation of girls and women.

This is most important if the health of high school girls is to be safeguarded. Men coaches, for example, have done their best to teach girls to play basketball as boys play the game. This is a mistake, for girls do not have the fighting instinct of boys. Some years ago special rules were set up to adapt this game to the abilities of girls. There are now plenty of women who understand these rules and who are fitted to have complete charge of girls' basketball.

Unfortunately, in many communities the coach is required, for the sake of economy and against his better judgment, to take over the responsibility for girls' athletics. A strong community backing of parents can easily bring about a happier state of affairs. Every girl needs the opportunity for vigorous healthful recreation under the best of leadership.

Let's Lift the Taboo

By THOMAS PARRAN, M.D.

Surgeon General Parran asserts that with educators, physicians and public health workers massing their forces in an organized attack, syphilis and gonorrhea may soon be added to the long list of conquered diseases.

IN THE war against communicable diseases, the battalions of public health have made great gains or appreciable advances in many sectors. The forces of smallpox, typhoid and diphtheria, once strong and dangerous, have weakened and retreated under the pressure of concentrated attacks. The forces of tuberculosis, occupying one of the widest battlefronts, have steadily given way.

The picture is different in two other major sectors. Opposing public health are the forces of gonorrhea and syphilis. Against these communicable diseases the public health tactics have been defensive—and no ground has ever been gained by defensive tactics alone.

Gonorrhea, making its concealed and insidious attacks now as it made them in Biblical days, affects all ages and classes. The tiny organism, shaped like a coffee bean, is responsible for 10 per cent of all blindness. (This figure will be happily lower in the next generation, for laws now require the administration of silver nitrate to the eyes of newborn infants.) Gonorrhea gives us nearly half the cases of sterility in women, about two-thirds of the surgical operations on the female generative organs and produces many chronic diseases of the joints, bladder and generative organs in both men and women. In the face of these figures, it is poor satisfaction to know that gonorrhea seldom kills.

"Greatest Killer"

Syphilis, recognized since the time of Columbus, and called by Dr. William Osler "the greatest killer," attacks or disables more than half a million persons a year. Chargeable to the delicate corkscrew-shaped organism are many of the stillbirths and deaths of babies during the first few weeks of life. Chargeable, also, are about 6½ per cent of all diseases of the heart and blood vessels and about 10 per cent of all insanity.

All of these things are known and have been known for years. In the light of this knowledge, syphilis and gonorrhea stand as stern indictments either of the techniques of public education or of our wisdom in the selection of public health educational tasks. An outbreak of infantile paralysis kindles wide publicity and comment; the continuing presence of syphilis and gonorrhea excites little discussion or action. Physicians, public health officials and educators have rationalized their disinclination to discuss the diseases publicly on the basis that the public was not ready. Yet, little or nothing was done to make the public ready, and the vicious circle was completed.

Educator's Rôle

Only within the last year has the fog of ignorance and social taboo begun to lift. The problem is beginning to be revealed and the revelation offers a challenge to the combined efforts of the physician, the public health worker and the educator. Each has his rôle; those of the physician and public health worker more clearly defined as to method, but not more important than that of the educator. It is upon the educator that the burden of public education must be placed. How the educator meets the task, what methods or techniques he develops will depend upon his understanding of the nature of the problem.

Foremost among the educational tasks is the need for dissociating syphilis and gonorrhea from morals. It is a biologic accident that each is spread chiefly by sex contact. From the medical standpoint they are communicable diseases and must be attacked with the same purpose that motivates the fight against smallpox or tuberculosis—the purpose of disease prevention. As long as the diseases remain a moral issue frank discussion and straightforward dealing with the problem will be difficult and innocent infections more frequent. Likewise, there will be an unnecessary continuation of congenital syphilis and infections from casual contacts, two types of transmission that account for many cases.

What facts other than the foregoing may guide the educator in formulating his part of the attack?

First, enough is known about syphilis, its cause, modes of transmission, control and treatment, to stamp it out as effectively as has been typhoid fever. For gonorrhea, while there are not as swift or sure means as in syphilis for rendering a case noninfectious, much can be done by prompt and thorough control measures.

Second, about 75 per cent of the cases of gonorrhea in the female and the majority of those in the male occur in boys and girls, young men and women under thirty years of age. A recent report of nearly 7,000 persons treated for syphilis in clinics last year shows that 80 per cent of the women and 75 per cent of the men were under thirty years of age. Other available data show that many infections occur among children of high school age. It is the concentration of cases in the younger age groups, with after-effects that persist through-

out life, that makes the need for public education so acute.

In any plan for the prevention and control of a communicable disease, the public health official centers his activities upon public education and upon the specific sources of infection. Unfortunately there is no measure of immunization that is effective in syphilis or gonorrhea as there is in smallpox or diphtheria. Therefore, the public health worker regards the hundreds of thousands of patients as his first point of attack. As with all other communicable diseases, effective case-finding methods must be developed and in this effort, public education has its definite rôle. That rôle is to emphasize the public health problem, to bring into focus the character of syphilis as a communicable disease, and to emphasize, especially among adolescents, the importance of early diagnosis and early treatment.

If 6½ per cent of all diseases of the heart and blood vessels and 10 per cent of all insanity in the year 1937 are due to syphilis, where were the cases of the disease ten, twenty or thirty years ago? The answer is obvious—they were in our high schools, colleges, industry or on the farm. It is with the purpose of preventing the by-products of syphilis ten, twenty or thirty years hence that case-finding and educational efforts must be directed toward early diagnosis and treatment.

It is appallingly true that many people regard gonorrhea as of little consequence and, therefore, seek medical advice and treatment too late to prevent chronic injury. It is equally true that for a variety of reasons, a large proportion of syphilis cases remain untreated for a year after the onset of the disease. The danger of unknown cases to the individuals and to public health is great enough to challenge the ability and ingenuity of all those who engage in educational efforts. How the program should be integrated with other educational procedures is the problem of the educator; what should be integrated is the problem of the public health worker.

Leaving the techniques to the educator, the public health worker visualizes a time when every child of high school age will understand the biologic nature of the reproductive function and the danger of its abuse. He will also have a knowledge of the sources and spread of communicable diseases. As a part of this training, the sources, transmission and results of syphilis and gonorrhea will be presented in as scientific and objective a manner as those of other communicable diseases. The importance of early diagnosis and treatment will be stressed in the same manner as it is emphasized in tuberculosis.

Pupils will be acquainted with the facts that syphilis begins as a primary sore at the point of contact within ten to ninety days following exposure, and that diagnosis then is made by a microscopic examination of material from the sore. They will be told that if treatment is instituted during this state, about 86 per cent of the cases can be cured and that delay markedly reduces the chances of cure. Pupils will be taught that the secondary stage is characterized by skin eruptions with or without sores in the mouth or throat, fever, digestive disorders or other conditions that are not usually associated with syphilis and that this stage may be so slight as to go unrecognized. It will be pointed out to them that the most highly infectious period is in the first stage and the beginning of the second; that sooner or later the third stage develops as an insidious attack upon one of the vital organs—the heart, arteries, brain, bones or eyes and that by this time the best treatment produces satisfactory results in less than half the cases. Like information concerning gonorrhea will be a part of each pupil's training.

The immediate task is to direct present interest and public discussion into channels of action. This means case-finding efforts and the development of more adequate facilities for diagnosis and treatment. Here, too, all groups—educators, physicians and public health workers—must combine their efforts because the economic, as well as the scientific, burden is great. With the three groups massing their forces in an organized attack, syphilis and gonorrhea may be added to the list of conquered diseases.

Information and materials concerning syphilis and gonorrhea may be obtained from the following: the U. S. Public Health Service, Washington, D. C.; the American Medical Association, 535 North Dearborn Street, Chicago; the American Social Hygiene Association, 50 West 50th Street, New York City.

Rural Schools Reorganized

By EDWIN R. EMBREE

AMERICA has provided schools and colleges beyond those of any other nation at any time in human history. But our education is not as good as our school plant. Of the whole educational structure, rural schools are the most unsatisfactory.

America has neglected rural schools and all other aspects of rural life. We have centered our interests and our ambitions not on farms and country life but on cities and industrial success. There is now some tendency to turn our attention back to the country, to shift our emphasis from making a living to some regard for the quality and content of life itself. There is a healthy revival of interest in the rural school. The curse of the rural school today is rote teaching.

The best way to vitalize the learning process is to keep close contact between school subjects and everyday activities. In rural areas simple handicrafts and nature study should be made a part of education, not necessarily taught in the formal courses but provided as related activities.

The strategic approach to any school reform is through the normal schools and teachers' colleges, which at the moment are the weakest members of our whole series of institutions of higher learning. The greatest blessing that is coming to higher education in America is the transformation of teachers' colleges into distinguished and creative institutions.

Rural Success Story

By EDWIN H. REEDER

SHE is a tall, pleasant looking girl, with a young face and hair prematurely gray. When she called on the telephone yesterday I remembered her well; she had been in one or two of my courses in the teacher training department of the university three years ago and had not in the least distinguished herself for her scholarship. As a matter of fact, I had had doubts as to whether she should be allowed to go into teaching at all.

In the practice teaching period in rural schools, however, she had shown extraordinary ability to get along with children. The state supervisor of elementary schools met me one day shortly after this period was over and said, "What do you know about this girl, M. C.?"

Cautiously I had responded, "What do you think of her?"

"Well," he said, "I visited the school where she was doing her practice teaching and she was out on the playground with the children. She can bat or field a ball as well as a boy. I later visited her reading class and it wasn't so good, but I'll bet on her anyway. She'll make good."

When she called on the telephone, she asked me if I had some materials on the geography of the United States that I could lend her. I dug out some from my files and she came around to the house for them this afternoon. She was particularly pleased with a picture unit on coal mining.

"This will be grand for Billy," she said. "You see I have twenty-two children and all grades through the eighth. He is my only eighth grader. He reads everything he can get his hands on. Now he'll take this unit on coal and he'll spend hours on it. He won't be content until he has studied and understood every picture and diagram in the unit. I have hard work to find enough to keep him busy. And he is always suggesting things we ought to study. Just the other day he said, 'When are we going to study about Eskimos? I don't know anything about them — not even where they live — and I want to know about them.'" (Shades of my lectures on methods of motivation!)

"How do you like your new school?" I asked.

"Oh, it's fine!" she answered. "The parents of the children are much better off than they were in the school where I taught last year. Why, we made $18.70 from our Halloween party this year and last year we made only $6.35. We bought a volley ball and net with some of that $18.70.

An indifferent student, this girl showed remarkable ability in adapting herself to rural community life and in inspiring the children in the school she taught to learn by broadening their field of experience

"Last Tuesday we had a grand time with some more of it. I brought all the children up here and we visited the university museum. Dr. P. [the curator] gave us cocoa and showed us around. And what do you think the children were most interested in? It was the automatic elevator in the building! Most of them had read about elevators but had never seen one. Mr. R., the assistant, took all the children up and down in it, and all of them mentioned it in their compositions next day.

"I must tell you about the rest of that trip, too," she went on with a grin. "I have a good friend at the community Y. W. C. A. She is swimming instructor for women. So I took all the children down to see an indoor pool. My friend showed it to them and then suggested they all go in for a swim. 'But how can we go in when we have no suits?' the children said. So I explained that the Y furnishes the suits so they can be clean and safe for the pool.

"Then I told them they would all have to take showers. They had never heard of showers and after I got through explaining what they are, all the children said, 'Well, what do we have to take showers for? Aren't we going in swimming?' More explanations and then we showed the boys to their locker room and the girls to theirs.

"I stayed with the girls, and some of them were so funny! They had never taken their clothes off before in front of anyone else and they wanted to climb into the lockers or under the benches! One little girl from a poor home had her underwear all pinned on with safety pins. She was so excited that when she undressed she just pulled the pins out and scattered them all over the place like a hailstorm. What a time I had scrambling for pins when she dressed, and getting her pinned in again!"

"How did they like the pool?" I asked.

"They loved it," she answered. "You know they go swimming all summer in the lake, so they could swim like fish. I had an awful time to get them out when it was time to go."

"Have you a good place to board?" I asked.

"Yes, pretty good," M. C. answered. "I had some trouble about it. You see the teacher who was in the school last year got into difficulties in the community. There is no water in the school and it all has to be carried from a farmer's well quite a long distance away. This teacher told one of the boys to get some water and he refused. So she beat him up quite badly and there was a

big row. She had boarded with the D.'s, where I board, and they said they didn't want any more school teachers. But it was the best place, as it is only half a mile from the school, so I went to talk with them. We talked for two or three hours [how I wondered what they had said!] and at last they agreed to take me if I would help Mrs. D. with the work on Saturday morning and other times when I am not busy. So I pay $5.50 a week and help some with the cleaning and dishwashing."

"What about your room?" I asked.

"Oh, it's a good room, but so cold! There is a little round hole in the wall that is supposed to heat it. But under my room is the parlor, and there is no stove in it, and the next room is the sitting room where the stove is. And the heat is supposed to come through the parlor and through this hole in my wall — and not much of it gets through. Sometimes I have to correct my papers in the sitting room. I go to bed to read. They do have electricity in the house, so I get into bed and light my reading lamp and read until my hands get stiff and blue with cold, and then I just have to go to sleep.

"Of course, though," she went on, "I go to sleep pretty early anyway, because I get up at 5 o'clock and have breakfast at 6. Then I go to the school and get there about 7. You see, I do my own janitor work. And sometimes when I have swept out the school and got the wood fire going so the room is warm, I feel as though I had already done a day's work."

"What about a church?" I asked.

"Well, most week ends I come up here to be with my brother. There used to be two churches in the town, a Baptist and a Methodist. Then they combined and took the Baptist church for their meeting house and sold the Methodist for a town hall. Now they have dances in the old Methodist church and that makes the Methodists so mad they won't go to the Baptist church but go into the town of X., four miles away."

"How do you get here on week ends? Do you have your own car?"

"Oh no, the G. girls who both teach in rural schools near by bring me. How could I afford a car? The G. girls and their father all went together and bought one. But I couldn't. Last year, though, I did buy myself a fur coat and I've just finished paying for it. I just had to have that coat, I was so cold! And now I'm buying a typewriter; the hectograph work for the children is so much better if it is done on a typewriter.

"Now that I have learned to use a typewriter, my brother who works for a coal company here in town wants me to come in and work in his office. It would be nice, I suppose; I'd be warm then. But I do love teaching so much that I hate the thought of giving it up.

"And that reminds me, sometimes there are teaching vacancies here in town. Do you suppose you would be willing to say a good word for me to the superintendent next spring when they are considering new teachers?"

In a Class to Themselves

By HOWARD TAYLOR

THE gifted child is here considered as one who because of exceptional ability cannot learn most effectively under conditions adequate for normal children. It would be helpful if the "gifted child" were as definable an entity as oxygen or as an onion, but such is not the case.

No matter on what basis of giftedness children are grouped, there will still be great variability. Clearly defined homogeneous grouping is practically impossible. If pupils must be grouped there is reason in placing the gifted ones together. But the line between the gifted and normal must never be sharply drawn and must be easily crossed in either direction.

Special classes for gifted children should be tested by the following principles: (1) education should promote social adaptation; (2) education should challenge fully the ability of the pupil; (3) education must be within the physical and mental limits of the child; (4) education should have depth and breadth through enrichment r a t h e r than height through acceleration; (5) maturation is important as well as learning ability, and (6) education should provide for individual differences.

The gifted child must learn to live amicably and helpfully with the ungifted as well as the gifted. Special classes do not isolate the child any more than bands or other organizations. These are, in fact, special classes for the gifted.

There is a danger that children set apart because of special ability may become conceited prigs, but this need not occur. The contacts in the broader school environment will serve as the best preventive.

There is a foolish exaggeration of the blighting influence of stupidity upon genius, occasionally the opposite effect may actually accrue.

While special classes may develop special gifts, the broader social environment of the school may inspire the common touch — a priceless gift even to the gifted.

For the gifted child intimate contact in special classes with other gifted children is at once the greatest stimulus and the best incentive to excellence of accomplishment.

Through the enrichment possible in special classes, the gifted child may escape becoming wise beyond his years and a social misfit, which so often follows too rapid acceleration.

Too rapid maturity generally leads to premature decay. Gifted children must have time to grow out as well as up; otherwise they may become intellectual morning glories. Time is an essential factor in growth.

Special classes under the direction of wise and talented teachers are the best means of giving to gifted children that education which is their right.

Equipped for Sound

By CLINE M. KOON

EIGHT hundred and forty-one public address systems were reported as belonging to 8,806 of the 21,000 school systems in the United States, according to data collected in the recent National Visual Instruction Survey. Many of these systems were purchased by local boards of education just as other equipment necessary for the proper functioning of the schools is purchased. Owing to the recent depression, however, a large percentage of the local boards of education have never seriously considered the purchase of public address systems. In some of these local communities, suitable equipment has been supplied by parent-teacher associations, community organizations, school clubs and similar groups.

One school reports that since the board of education was unable to purchase centralized equipment, the school raised funds to buy its own equipment. Parts were purchased for a complete sound system with twenty loud-speakers, one in each room. The general science and physics classes helped the janitor install the equipment and fixed a room next to the principal's office to be used as a studio. The total cost was $200.

In Providence and Indianapolis, centralized systems were designed, partially built and installed in various buildings by trade school teachers and pupils.

For a number of years radio engineers have been developing what is commonly known as the centralized radio-sound system. In brief, this equipment consists of one or more high grade radios, generally installed in the office of the principal, and wired so that there are loud-speakers in various classrooms and other selected points. A master control panel is located in the office or point of installation, and this has a series of jacks, similar to a telephone switchboard, which enable the principal to release the broadcast at will to one or more rooms. Generally there is a microphone connection to enable the principal to address the entire school without the necessity of assembling them in one place. An electric phonograph pick-up is usually part of the equipment. Some of the sets are capable of receiving as many as four programs at one time, and their use is most flexible. All programs are controlled from one point.

The central panel, or switchboard, should have output connections leading to all rooms and input connections leading to the radio unit (or units), phonograph and microphone. In this way a distribution can be set up that will have a maximum flexibility of input and output. Brockway and Brockway point out that the power of the central panel should be diverted into as many units or small powered channels as is practical for maximum utilization.* A four-channel arrangement, for example, will permit four separate programs to pass through the central panel at one time, thereby increasing fourfold the flexibility and possibility of utilization. The number of radio receiving units to be installed should depend upon the size of the school and the number of separate radio stations that are to be heard at the same time.

The loud-speakers *should* be equipped with volume controls and placed in such positions in the classroom, auditorium, gymnasium, cafeteria and other places as will facilitate listening. The acoustics of the room should be tested. As a rule pupils listen more attentively when the loud-speaker is placed in the front of the room about on a level with their heads. Loud-speakers, in most cases,

> That statesman who dropped back to see his old school between trains —there wasn't enough time to call a special assembly, so you simply tuned in the entire school and he talked most informally from your office. A great man and a great speech! That was one time you were glad you'd talked the board into purchasing centralized radio-sound equipment. And when one morning fire broke out in the east wing, that was another time. . . .

*Brockway, Don C. and William W.: Survey of the School Use of Sound Equipment. In National Elementary Principal's Thirteenth Yearbook: Aids to Teaching in the Elementary Schools, pp. 383-387, Washington, D. C. National Education Association, 1934.

are permanently mounted on the walls. These are more attractive, more substantial and, if properly placed, reproduce sound better than portable speakers. They cannot be moved from place to place, and if they are poorly located it is difficult to make corrections.

Apparatus should be installed to meet the specifications of Underwriters Laboratories and then should be inspected regularly to ensure good reception. Slight variations in the efficiency of radio apparatus may affect materially the understanding of a radio program. Quite a number of principals report difficulties in reception which interfere with the systematic use of receiving equipment. If the radio is obsolete, much of the time it will not work and when it does the reception is poor. Therefore, some provision should be made to ensure the maintenance of the equipment in an efficient condition.

A centralized sound system combining radio, phonograph, microphone, building telephone and recording equipment is flexible and may be used in many ways to facilitate and coordinate school work. Besides broadcasts regularly used as part of class instruction, phonograph selections and microphone input may be reproduced instantly in any or all rooms in the building. In addition, music may be supplied for lunchrooms, parties and plays. If microphones are installed in the various classrooms, it will be possible for principal or supervisor to listen to a class without the disturbing influence frequently caused by a personal visit.

The range of possible uses of centralized radio-sound equipment may extend from a demonstration lesson by a supervisor or a standard arithmetic test for all pupils of a given grade within the system, to an important announcement or a fire drill or an entertainment feature for the entire school. The public address system also can be used for short talks by distinguished visitors who cannot be present at a regular assembly, thereby avoiding the disturbing aspects of special assemblies.

The microphone assembly, of course, can never take the place of the actual gathering of all the pupils at one place. There is a social and physical quality in the physical presence of the children that is completely lost with a broadcast. The human touch is lacking.

The microphone becomes a valuable timesaver for making announcements to the entire school or to any grade or class. In the past, the principal was obliged to go from room to room, to send a messenger, or to call an assembly. With the use of centralized radio-sound equipment general announcements, such as attendance for the day, important news items, changes in regulations, best kept school rooms, honors conferred upon the school or individual pupils, honor rolls, good deeds and civic enterprises within the school, can be made to the entire school or to any grade or room within the school.

Many principals report that they have found the microphone the most valuable part of the equipment. The building telephone can be connected with the wiring system so that the principal can speak to any or all of the teachers at one time, and they individually can speak to him.

The principal should plan his microphone communications to the school so that the fewest possible interruptions occur. Otherwise many insistent demands of the loud-speaker may interrupt normal class work to the extent that it will defeat the very purpose for which it was installed. This applies with special force in primary grades where classes are not conducted on fixed schedules, and in progressive schools where the teaching-learning situation moves forward without breaks.

At the homeroom period, routine announcements, short talks on health, school spirit, the use of the library and pep talks can be made over the centralized radio. One school reports that as the flag is raised in the morning, a school trumpeter sounds the call to colors through a microphone

Installing a public address system at an Indianapolis high school.

in the principal's office. Every teacher and pupil stand in salute. After this, the principal greets the school and makes the morning announcements. If this procedure is followed, due care should be exercised to prevent the ceremony from lapsing into monotonous routine.

The preparation and presentation of programs over a centralized radio are stimulating activities which may be richly creative and develop a variety of worth while skills. Participating pupils derive many of the benefits associated with actual broadcasting from speaking over the microphone in the school. They can reenact historic debates, conferences and other dramatic instances in history while their classmates listen. No costumes are required. "Believe It or Not" historical facts, news events and the world traveler are other features that can be offered with appropriate music and sound effects. A "March of Time" reenactment by pupils may be much worth while. The children learn to speak and act the parts most realistically.

By means of the electric pick-up, phonograph selections may be used in any classroom, either to enrich a homeroom program or as part of the regular classroom instruction. Records may be played as classes change, at dismissal or for physical exercises or rhythmic games in the gymnasium. A spirited march heard from each classroom loud-speaker at the close of day definitely stimulates elementary pupils.

Recording equipment is just beginning to find its place in the school system. The regular microphone can be used to make disks which can be reproduced on the phonograph and amplified for any class or the entire school. It appears that disks made in school may find many uses. They are of invaluable assistance in providing the speaker an opportunity to hear his own voice in order that he may improve his diction, enunciation and voice control. They furnish a perfect measure of pupil progress from the inital effort to the end of the course. Finally, they provide valuable historical material which may be kept for use many years later.

In addition to their uses for communication to the classes and wired broadcasts that have been referred to elsewhere, some supervisors suggest that if microphones are placed in the various classrooms they can listen in to class work without the difficulties caused by personal visits. Some teachers are quite sensitive about this type of absent supervision, but if the supervisor is diplomatic and convinces the teacher that their goals are identical, it will usually be possible to arrive at a clear understanding.

It is the duty of the supervisor to inspire initiative on the part of the teacher and to win her confidence. If this is done it appears that listening-in may become a valuable auxiliary, since this type of absent observation will enable the supervisor to become better acquainted with the teacher in a shorter space of time, to the advantage of the supervisor, the teacher and the pupils with whose education both are charged. But unless this type of supervision is most judiciously used it will not foster a cooperative spirit or encourage self-reliance.

Because of various disadvantages, this type of supervision should be used sparingly, limiting it to instances in which a splendid cooperative relationship between the teacher and the supervisor has been established. Even then it should be regarded as supplementary to personal visits, since the total situation can never be evaluated from listening alone. Instruction must be seen and felt, as well as heard, in order to be judged. Since the supervisor is not present, there is danger of him assuming the rôle of a "snoopervisor" or detective, rather than that of a friend and guide, working with the teacher and pupils, thereby disregarding the fundamental business of supervision, which is to deal sympathetically with problems of human relations in an effort to improve instruction.

The radio, with its splendid possibilities, should be used to promote learning for all teachers as well as pupils in an atmosphere of happiness and mental health. In order to prevent the possible pernicious influence of microphone supervision, it is strictly urged that all classroom microphones be so installed that the teacher can connect or disconnect them at appropriate times.

"Show Me," Say Films From Missouri

AN INCREASE of more than 150 per cent in the use of 16-mm. teaching films is reported for Missouri by the visual education service conducted by the university extension division.

"Four years ago we had thirty 16-mm. films, and the demand has become so great that we've increased that to 200, and we're unable to meet the demand now," R. L. Davidson, Jr., acting head of the university extention division, declares.

Although the 35-mm. films are the standard size and there has been an increase of about 10 per cent in the demand for them, the servicing of these films will eventually be discontinued, Mr. Davidson says, because new equipment is coming out in smaller size, transportation of smaller films is less expensive, and both types, when projected, appear the same size on the screen.

The growing prominence of visual education in conjunction with other teaching methods is understandable, Mr. Davidson says, "when you consider that 85 per cent of learning is received through the eye. It is a much clearer way of teaching.

"Visual aids give the child something to work with; tests show that they broaden his scope and knowledge to such an extent that he is able to progress more rapidly with his education."

The visual education service is intended primarily for residents of Missouri, but shipments of films are sent to high schools in Memphis each week.

Films are also sent to high schools in Colorado and to schools in various parts of Illinois and Nebraska. Others are sent to CCC camps.

"We have thirty-seven schools enrolled for regular service. They receive films each week. We have a large number that take individual film shipments for their classes each month," Mr. Davidson declares.

Bridging the Gap—From

By MARION REX TRABUE

THE gap between school and work is not simply a period of temporary unemployment in the life history of a young person. In far too many cases it involves a readjustment of the youth's fundamental ideals, purposes and habits.

What the youth has learned in school is too frequently a real handicap to him in making satisfactory adjustments to work life, even if he is fortunate enough to secure employment when he leaves school. The school ought to be making positive contributions to these adjustments between the education of young individuals and their work life instead of building, as it so often does, unnecessary obstacles to such adjustments.

Specialization Is Discouraged

The typical school insists that the pupil must be "broadly educated." He is told that he must "prepare for life rather than for making a living." He is taught that he must not be one-sided in his interests and abilities.

Specialization is not permitted in most high schools and colleges of this country. Yet, as soon as the youth comes into realistic contact with business and industry, he finds that, unless he can do some one job better than anyone else available, he cannot expect to receive more than a nominal wage for his work.

Our so-called "intelligence tests" measure the kinds of abilities possessed by typical college professors and are consequently rather useful bases for predicting how successful a pupil will be in doing academic high school and college work. If a pupil happens to have this type of ability, his teachers in school usually praise and reward him for being keen, bright, intelligent and worthy of help.

If a pupil has little of this academic type of ability and interest, however, his teachers tend to ignore him and to speak of him as slow, dull, inferior or unintelligent, regardless of any other socially important abilities, traits or interests he may have. In the typical village and small city high school, our young people are being led, frequently by direct statements and still more often by indirect but effective insinuations, to look up to the professions and to certain semi-professional types of work and to look down upon labor, the trades, factory work and service types of jobs.

If the academic type of pupil were the only one being exposed to this conditioning process, the results might not be so disastrous. At present, however, more than half of our young people are entering the high schools in which this insidious process is going forward. "The higher walks of life" is a phrase used constantly in the schools to refer to the academic professions.

Few Professional Jobs

A recent tabulation of 4,859,350 nonrelief positions filled by the public employment offices of this country shows, however, that only 1.5 per cent of all the jobs filled were in the professional, commercial and financial classifications.

More than half the total number of the jobs filled were in building and construction; 18 per cent of them were in domestic and personal service; 8.4 per cent in agriculture, and 8 per cent in manufacturing. All of these fields in which jobs are actually being filled by the public employment service are still belittled and looked down upon by the average school teacher.

Instead of facing the facts as to the kinds of work actually available in the world, the schools are instilling ambitions that only a few can achieve, extravagant tastes that relatively few can satisfy and expensive interests that few can ever afford to follow. Here is the basis for much future discontent and frustration.

Appeals to teachers and school officers to stop speaking of lawyers, teachers and doctors as superior to plumbers, farmers and cooks are frequently met by the statement that "as a matter of fact they really are superior."

A typical teacher, it seems, is unable to imagine that anyone could actually prefer to sell goods in a ten-cent store rather than to teach in a high school. It is hard for an academic mind to believe that anyone would ever get more real satisfaction out of a repetitive factory job than out of the varied activities of a professional life.

There is a rapidly growing body of scientific evidence, however, that the possession of strong abilities in academic lines actually tends to make one unhappy and unsuccessful in certain nonacademic types of work.

It is gradually becoming clear that success and satisfaction in a job spring from the possession of an appropriate combination or pattern of abilities, interests and personality traits, each having a strength or intensity that is just great enough for that job, and that the particular combination or pattern that is most helpful in one job may be a definite handicap in another.

What Jobs Are Superior?

Is it not time for all of us to stop speaking of one respectable job as superior to another? Any job that needs to be done in a community should be done by a person who is reasonably well qualified by nature, training and experience for that particular job.

For an individual with high abilities and interests along mechanical lines, but with only average academic traits, being a garage mechanic may be far superior to being a high school

School Days to Work

A New Teaching Standard Is Needed

The school's first duty toward its pupils is to learn them, rather than to teach them. The old habit of treating them as if they were all alike and all planning to be professional workers is positively immoral.

teacher of history. On the other hand, the community might possibly be justified in looking down upon an individual who tried to be a garage mechanic if his mental and personal equipment was merely that of the history teacher.

In a truly democratic state, each individual youth would be helped to find and to prepare for the type of socially desirable work in which he could obtain the greatest satisfaction and success from the employment of his own combination of traits and abilities. Everyone would then honor him for the efficient and unselfish service he was rendering to the commonwealth.

In most of our schools, however, little or nothing is actually done to help young people to discover their own characteristics, and little, if any more, is done to help them to understand the combinations of characteristics that are appropriate in different kinds of work.

Yet certain professional occupations that are regarded as totally unfit for the great majority of these pupils are constantly being honored and held before them as ideals toward which to strive. This gap, between the types of work they can and actually must do in life and the type of work that is being praised by the school as dignified and worthy of honor, must be closed as rapidly and effectively as possible.

In pioneer days the school had little place in the life of a youth. He began, almost as soon as he could walk, to share in the work and responsibilities of the home. He helped with the planting, the cultivation and the harvesting of the crops. He helped with the care of the live stock, with the building of shelters, with the trapping of game, with the making of tools and equipment and with all the other activities of the community. In all of this he was learning to do many different kinds of work, and he was also discovering his own vocational interests and developing his latent abilities.

Work Routine Is Simpler

Unfortunately, the progress of civilization has broken down this opportunity to begin work early in life and to learn from actual participation which jobs are most interesting and appropriate.

The persistent tendency of all our modern employers is to break down each occupation into simpler and simpler routines that can be more quickly learned, at the same time making it more and more impossible for those who are not actually employed to learn what the job involves by observing or participating in it. Practically every factory door now carries the sign "Stay out!" Many offices and business places secure the same result with the sign, "No loitering."

While development in the field of work has been from broader to narrower activities, the development of the school has been in the opposite direction, from an extremely narrow field toward a great variety of fields. Beginning with a course set up for the training of one profession, ministers of the gospel, the school first extended itself to include the preparation of lawyers, doctors and other professional men. Later it began gradually to admit other students.

At first only the exceptional person was interested in attending school, but now every child is required to attend regularly. As long as few persons went to school and everyone obtained his initiation into work from actual participation in adult community life, there was no reason to ask whether a gap existed between school and work. Furthermore, as long as school work was recognized as little more than a vocational preparation for a few professions in which the demand for workers exceeded the supply, no gap really existed.

It is only since the school became a universal requirement and assumed the task of preparing all young citizens for life, and since work became specialized and hidden behind closed doors that the growing gaps between the two have been brought sharply to our consciousness.

The early school and its program were fairly well adapted to the needs of the small group of pupils who wanted to become ministers and lawyers, but the narrow academic curriculum and memoriter methods developed at that time for the vocational training of this limited group are utterly inadequate for effective education of the masses of pupils of all types who are attending our high schools and colleges today.

Educational Advance Is Slow

Although the work patterns of modern life are far different from those that existed when the school was originally established, the educational institution has changed so little and so slowly that the gaps between school and work are constantly growing greater.

Still another important element in the total situation is the fact that we do not yet have adequate knowledge

of the exact combinations of characteristics that make for maximum success and satisfaction of the workers in the different occupations. We do not yet know from careful investigation exactly what combinations of abilities, interests and personality traits are really needed in more than one out of every hundred occupations. Being ignorant of what the effective worker must actually know and be and feel, we cannot determine which of these traits the worker must have before training is begun, or which of them should and can be developed by training.

Research Is Needed

If school and work are to be brought close together, an enormous amount of research must be done upon the optimum combinations of human characteristics needed in the workers on different types of jobs.

The first and most fundamental step in closing or bridging a gap is the development of a powerful purpose to close it. Until citizens generally are determined that there shall be no gap between school and work, I do not believe that it will be possible to secure the funds and cooperation necessary to close it effectively. The research needed in developing instruments of measurement for validly determining the characteristics of human beings, the thorough going reorganization of school programs and procedures, the shift from production to training as the primary objective in early employment and every other possible effort to correct the situation will probably fail unless a sufficiently large and powerful group of people is determined to correct it.

The traditions of most employers and teachers must certainly be broken. Both groups must become so concerned about the vital needs of young people that they will be ready to give up class or personal advantages in order to promote the common welfare of youth and the state. By cooperative organization, the young person who needs it could be given a variety of appropriate work experiences much earlier than is common today.

A certain number of hours each day spent at a real job, and later a certain number of days each week, or a certain number of months each year, would give the youth an initiation into work that no amount of schooling could give. The young person's first jobs should be recognized as a normal part of his education and should be supervised jointly by the school and the industry in which he works.

In addition to introducing work experiences at an earlier age, we should continue appropriate school experiences to a later age for large numbers of our young people. The word "appropriate" is, however, the most important part of my suggestion. Merely staying longer in school will be of little value either to the young person or to the community. An academic school is not a suitable place for many of these youths.

Every school should be forced by the intelligent citizens of the community to maintain a complete cumulative record of every pupil's behavior, achievements, interests, abilities and purposes, and then to modify its educational efforts in terms of the individual needs, both cultural and vocational, revealed by such records. Psychometric tests, physical examinations and behavior anecdotes are far more essential than textbooks in mathematics or history.

The first duty of the school toward its pupils is to learn them, rather than to teach them. The old habit of treating them as if they were all alike and all planning to be professional workers is positively immoral. The school must know what traits are actually needed in each type of work, what traits each youth in the school actually possesses and how to go about helping each individual young person to build his experience and personality in appropriate directions.

The modern world is full of a bewildering number of agencies and organizations, each with a definite program to put across. The school has too long been one of these inflexible agencies. It should be ready, however, to change its program and to make the social adjustment of each individual young person the all important standard from which to determine its activities. If the school is unwilling or unable to do this, some other community agency should be set up to do it.

Each youth must be helped to understand himself and his own possible contributions to community life, and then he must be helped to realize those possibilities rather than blocked by required uniform programs and heedless adults. The gaps between school and work must be reduced for all young people, closed entirely for as many as possible and carefully bridged for all of the other groups.

Keeping Children Sane

By O. R. YODER

STATISTICS show that one million of our school children are destined for state hospitals for mental disease and many more will go to prisons. More of these children will be hospitalized for a mental disease than will be graduated from colleges and universities. The cost of educating each child in the United States is $85 annually. It costs taxpayers in the state of Michigan $275 per capita each year to care for the insane.

One-half of the cases of mental disease can be prevented. A definite educational program in each school and each home will aid materially in preventing crime and insanity.

Happy, well-adjusted children must be healthy. They must have economic, social and emotional security. Hobbies, many extracurricular activities, the free expression of love and sympathetic understanding are needed to shape their personalities.

To reach happiness and security the child must adjust socially. He must also adjust to law and order and to his own ability. Individuals who are not socialized give to us in state hospitals our many cases of dementia praecox. Last year we carried on an experiment with a socialized program which showed that extracurricular activities definitely aid in the improvement and recovery of a large number of dementia praecox cases.

After the quake, the Anna school building was judged damaged beyond repair. Walls were cracked from roof to foundation and bulged. The chimney, shown below, was a leaning tower.

Earthquake in Anna

By GEORGE RILLING

NOTHING was unusual about the dawn of March 2 in the little community of Anna, Ohio. The men of the community were up early to do their chores while their wives prepared breakfast and packed lunches for the children who were soon to board busses for school.

With few exceptions the pupils of the Anna elementary and high school grades, totaling 370, were in their respective classrooms by 9 o'clock. The program of the school was in full swing when the community was shaken from its customary quiet and peace.

The school office occupied quarters below the homeroom of the senior class. At 9:48 the superintendent, who was in the office, heard a great disturbance which appeared to be coming from the senior room. Desks in that room were of a movable type, and he concluded that the seniors for some reason or other were pushing those desks across the floor in a violent fashion.

"What's wrong with those seniors?" the superintendent asked the secretary. But as he uttered the question the floor began to vibrate and tremble, the woodwork creaked, several windows cracked and some plastering fell.

"It's an earthquake! We must leave the building!"

On this occasion the school's public address system was an indispensable instrument. The superintendent turned on the power to the amplifier, grasped the microphone and talked to seventeen of the eighteen rooms in the building. He thought he was speaking to all of the rooms, but the speaker in one of the rooms had been thrown to the floor by the shaking of the building, narrowly missing the teacher in charge of the room.

Wires were jerked loose, but fortunately all children and teachers could be directed to leave the building at once. No one was injured, not even scratched as every child and teacher marched out of the building in the same order as in a regular fire drill.

The local telephone exchange cleared the switchboard to call the eight drivers of the school's busses. The children were dismissed for the day and until the building might be thoroughly inspected.

Men teachers, school custodian and boy scouts were permitted to enter the building to retrieve pupils' wraps and lunches.

In less than an hour all pupils, trembling and confused, were on their way home.

In a thorough inspection of the school by building inspectors, architects, contractors and school officials it was found the building was damaged beyond repair and that other quarters would be required for school purposes. Walls were cracked from the roof to the foundations, windows were broken and walls bulged out.

Where would adequate facilities be found to house the pupils and teachers of the school?

The two local churches were inspected and found to be safe, and they were offered to the school officials. Adequate sanitary facilities

were provided in a few days, the water of all wells near the churches was tested, streets were closed to provide play space and safe passage for pupils.

On Monday, March 8, the entire student body met in the churches at 9 a.m. Every child, every class and every teacher received instructions on the procedure that would be followed in moving textbooks, desks and other equipment from the school to the churches.

At 9:30 high school pupils and teachers marched from the one church to a designated place near the high school entrance to the school. The elementary school marched to the school grounds near the elementary school entrance. Volunteers among men and some of the women of the community were assigned to enter the building and to bring out the books and equipment from the various rooms. All this material was relayed to pupils of the respective grades and was carried to the churches.

In less than an hour and a half the most important equipment including books, desks, chairs and supplies was removed from one building and carried into two other buildings several squares away.

When the equipment was fairly well arranged in the new quarters regular classes were begun and the entire schedule for the day was followed out.

Members of school and community retired that night, a tired and weary group; retired to be awakened rudely at 12:45 a.m. by another severe quake. Some were shaken from their beds.

Fires in furnaces and stoves had burned low, but no one dared rebuild them until chimneys and flues might be inspected. Chimneys that had been rebuilt after the quake of March 2 were down again; 90 per cent of the flues of the village homes were twisted until they looked like piles of blocks set up by a preschool child.

The school was damaged further and the churches were declared unsafe. Along with the closing of the churches went the temporary school facilities. The board of education decided to call a meeting of property owners or tenants along two streets of the village. At the meeting these people were asked for a room or two in their homes to house the 370 pupils for at least twelve weeks, the remainder of the school term. Heat and electric current would be provided by the board of education and all floors would be covered with material satisfactory to property owners. It was further agreed to repair or replace any damaged equipment in the homes.

Furniture was stored, school equipment was taken from the churches and into the fourteen private homes, rest room accommodations were provided, drinking water was tested. The village council granted permission to close four squares of streets and the state highway department provided signs to detour traffic from the school "campus." Members of the state fire marshal's office inspected the new quarters, as did members of the Ohio department of education. A teacher removed the public address equipment from the school building and placed a speaker in each of the rooms to be used in the fourteen homes.

In his office in a private home, the superintendent kept in touch with the scattered classrooms by means of his microphone.

Classes began in new surroundings on Monday, March 15. The children appeared on time; boy scouts assisted all pupils to find their new "homerooms." At 9 o'clock the entire student body and the fifteen teachers were ready for the day's work. All speakers of the public address system were connected; general announcements were made relative to school activities in the new quarters. After specific instructions were given as to the home in which each class was scheduled to meet, the signal was given to move to the class of the first period of the day.

For twelve weeks a regular schedule was maintained; physical education classes met outdoors in good weather; games were played on the streets. Gymnasium activities and the senior class play were held outdoors. For the play the school amplification system was augmented with several sensitive microphones and a preamplifier. The report following the play was that everyone heard every syllable.

The past school year has been an unusual one; it has brought out the best thought, the ingenuity and the finest cooperation of a rural community. Many problems lie ahead.

Fortunately, a member of the board of education had insisted that the board reduce the amount of the fire insurance and wind insurance being carried on the school building. He suggested that a large brick structure would not blow down, nor would a fireproof building burn; he made these statements after a slight tremor in 1931. When policies expired in 1932 his suggestion was followed. The board of education paid $90 in premiums for six years of protection against earthquake damages. On April 10, 1937, the board received a check for $30,000 in full settlement for damages caused by the quakes.

The board is now engaged in obtaining federal assistance for a new school building and in attempting to obtain temporary portable buildings for school activities during the coming fall and winter. The entire school building has been razed. The new building is to have a ground floor and a main floor, and will be constructed to withstand tremors to a large degree.

Citizens of Anna have expressed their thankfulness that no one was killed or injured. The community feels that the children must be housed in a larger and safer building. With the loyalty and spirit manifested by all its citizens the community can now rise and look toward brighter days.

Preserve the Teacher

By THEODORE KAMBOUR

THESE are days of rapid changes within and without the school. Departures by administrators from traditional practices have been so manifold and so variegated in nature that confusion was bound to occur. The secondary classroom teachers have been more violently subject to this confusion than any other teacher group.

Too often our administrative zeal has demanded more of the teacher than she could accomplish without compensating alteration of her former program. There is no doubt that such unthinking and careless planning by some administrators has led to distrust by staff members.

Most of us have had cause to view with apprehension isolated instances in which members of our profession have attempted to justify their existence by promoting publicized novelties. This apprehension has been often savoured with sadness when we reflected upon the consequent insincerity born in staff members. In some cases teachers have rendered their superior officers apparent loyalty in open places, while in confidence they have talked rebelliously of doing only as much superficial work on novelties as was compatible with well camouflaged insincerity.

Leaders Make Excessive Demands

Honest, aggressive and zealous leadership is in grave danger of creating just as serious situations. Those who attend conventions, read widely professionally, those who are called upon to address educational gatherings, are most likely to create such conditions for themselves and their staffs. This is the group that learns of new departures and listens to earnest speakers who advocate innovations, new devices, new services.

Consider latter day departures we have all heard urged by experts in education. Let us limit ourselves to departures not strictly within the classroom teacher's activities. No account will here be made of recent changes in pupil-period loads or changes in methods. These changes have been momentous and have added materially to the teachers' burdens. Omitting these, let us confine our thought to the new extracurricular activities.

A partial list would include the following, the figures in parentheses being the estimated number of hours she would have to spend each week in order to accomplish each item with a reasonable degree of efficiency.

Added to Teacher's Week

Every teacher should direct some extracurricular activity in order to keep closer to this younger generation (4); every teacher should be active in the P.-T. A., in order to be in touch with the parents of the pupils (2); the high school must assume its natural leadership in development of adult education, each teacher being expected to contribute to the initial program (2); every teacher should visit the home of every pupil in her classes and homeroom (3).

School buildings belong to the public and as such they should be used by community groups, under faculty supervision (2); to grow properly professionally, each staff member should contribute heavily to some of the series of faculty meetings (2); no teacher can successfully manage a class without detailed, written plans so meticulously prepared that the supervisor can instantly ascertain from the written plans the direction the teacher is taking and reasons therefor (4); every teacher should attend one church service each week and identify herself actively with some subsidiary church organization, such as teaching a Sunday school class (4).

Each teacher should identify herself with a service group, or organization of similar nature, in order to become familiar with problems of the community and the personalities solving those problems (2); the teacher must keep up with the trends of the times by attending productions in drama, art and lectures (3); the teacher must keep up professionally by subscribing to two educational magazines and reading at least one such book a year (1); the teacher should belong to and be active in all professional educational organizations — local, county, state and national (4); each teacher should show personal interest in the activities of the school by attending every public performance presented by any group in the school (5); every teacher should read widely magazine and book materials in his curricular field and fields adjacent thereto, in order to be able to supply to his pupils a rich background to his basic teaching (4).

Do superintendents or principals always realize when they decide to stress extracurricular activities how much extra work this will make for the teaching staff?

Some of these estimates may be too high as much would depend upon of what each item is comprised. On the other hand, all of us in administrative positions must seriously ask ourselves if we have been accurate judges of such time estimates.

Consider, for example, the teacher who is expected to visit the homes of all her pupils in classes and homerooms. Suppose the teacher has a load of 125 class pupils and thirty in her homeroom. Of this total of 155, assume that there will be enough duplications of pupils and brother and sister combinations to reduce the number of homes to 120. If the teacher plans to visit two such homes in an evening, with the expectation

of really learning enough about the home situations to make the visits worth while, it is difficult to understand how she can do it in less than two hours for an average. Counting the time for preparation, including dressing, travel to and from the homes and any subsequent recording of her information, it is scarcely conceivable such visits could consume less time. This teacher would thus need 120 hours for the year, a bit more than the estimated three per week.

If these things are weighed tolerantly it should become apparent that even moderately zealous administrations can seriously burden a teacher by insisting on thorough application of several of these proposals. The temptation to insist that some of these items be adopted is all the greater because they all have merit. The teacher, already burdened by greatly increased loads in the classroom itself, may thus be called upon to do more than her physical and nervous equipment can stand.

We, too, often forget the teacher's nervous system, despite knowing that any classroom teacher is subject to considerably more constant wear and tear nervously than are most adults. The difficulty lies in our eagerness to try new things. We plan their adoption and turn to other matters. After a lapse of time we find that progress has been made along the lines directed. Somehow we unconsciously assume the progress reported has been accomplished with no extra expenditure of time and energy. We forget that such added burdens contribute to the total nervous fatigue of the teacher.

Obviously administration in medium sized school systems is in greatest danger of thus according teachers unsympathetic management. In the smallest school systems personal touch is so inescapable that little such danger can exist. In the larger systems the increased number of faculty members tends to spread such burdens so that individuals escape excessive loads. Further, teachers so inclined can easily hide discrepancies in their execution of such policies. They will be lost in the crowd. In school systems in communities of population range from 4,000 to 15,000, such defenses are frequently unavoidable.

The wise administrator will refuse to place such burdens on his staff without giving thorough consideration to the necessity of altering teachers' loads in compensation. Generally speaking, our teachers work themselves to the efficient limit of endurance. At that point good work ceases. If further burdens are imposed without administratively planned compensations, the teacher will be forced to provide them. Usually compensation will be found in impoverished instruction.

As tactfully as circumstances dictate, teachers and their superior officers must make clear that, in practice, basic teaching and its allied problems must be given first consideration. The teacher must be provided with proper time and energy for thorough preparation and execution of her basic task.

Never before has it been so imperative for the administrator to think straight through to his own working philosophy of education.

My conclusion is that we must incorporate these facts in our principles of administration and abide by them:

1. No departure or device is worthy of adoption unless the staff is thoroughly convinced of its value. Far better not to attempt a departure than to encourage even a small degree of insincere staff assistance.
2. Departures in practices should be selected after careful study. This should include determination of the suitability of the activity to the local situation. This implies study of it with respect to the nature and size of the community and the character of the staff. It should also include study of the necessity of altering teacher loads in compensation.
3. The basic duty of the staff is excellent classroom instruction. No changes in practice should be considered without the study of possible effects upon this basic duty. This includes serious consideration of all factors that can possibly affect teacher health in all its phases.

School Gardening—Why and How

By PAUL R. YOUNG

WHILE most school people are quick to admit the educational value of gardening for children, they seem unwilling or unable to accept it as a part of the regular school program. Until this is done, both schools and pupils are the losers.

Fundamentally, gardening is a science, applied in aspects within the everyday experience of boys and girls. The obvious place for it in the school curriculum is, therefore, as a part of elementary science, general science or biology. It can vitalize those subjects by linking them with reality as the pupils see and experience it. Principles applied in that way carry far more conviction than when read, stated or even demonstrated in the usual laboratory manner.

While thus benefiting from gardening as an integral part of it, science instruction can likewise give all pupils through that means tremendously valuable educational experiences in the avocational field and in character building.

Methods by which gardening experiences can be effectively organized within the school program include: (1) classroom lesson units in garden science, such as care of house plants, or making new plants from old; (2) school-home gardening projects, planned and organized in school and school-supervised in their conduct at the pupils' homes, and (3) school garden tracts in which pupils grow gardens on property controlled by the school and under teacher guidance at all times.

All these methods are being successfully used. The first reaches all pupils in a limited way; the second reaches the maximum number to whom actual school directed garden projects may ordinarily hope to be brought, and at minimum costs, while the third gives maximum educational advantages at a small increase in cost.

Pupils and Parents Have Rights

By M. M. CHAMBERS

PUPILS and their parents are of course affected in some manner by any and all legislation relating to schools, but they are touched most directly in matters relating to child labor, compulsory school attendance, school health regulations, curriculums, textbooks and school transportation.

An advance in child labor legislation during the current year is an Indiana statute prohibiting minors under the age of eighteen from being employed in any capacity in a specified list of hazardous occupations, including oiling or cleaning moving machinery, operating elevators, manufacturing or storing explosives, mining coal and manufacturing or selling alcoholic liquors. This law also includes an omnibus clause forbidding the employment of minors in any other occupation dangerous to life or limb or injurious to health or morals. No boy under eighteen is permitted to work as a messenger before 6 a.m. or after 10 p.m. No girl under eighteen is to be employed in any capacity in which she is compelled to remain standing constantly. Females of any age are prohibited from being employed in any mine.

Establishes Emergency Schools

California authorized county superintendents to establish emergency elementary schools or to provide additional emergency teachers for the regular elementary schools and provide transportation, all from the unapportioned county elementary school fund. This will make elementary education accessible to the children of migratory laborers.

New York provided that pupils residing in a district where high school courses are offered, but where no vocational high school is available, may select and attend any other academic school in the state in which vocational courses are available. Tuition in excess of the state tuition shall be a charge upon the home district. The home district is not required to pay for the transportation.

Pennsylvania raised the age of compulsory school attendance to seventeen for the year 1938-39 and to eighteen thereafter. Excepted are pupils who have been graduated from a four-year high school and pupils who are at least fifteen years of age and have completed the sixth grade and whose parents furnish evidence of imperative need that they be excused to do farm or domestic work. Pupils at least sixteen years of age who have secured useful employment are also exempted.

Tightens Attendance Laws

Rhode Island tightened the compulsory attendance law by closing the loophole that permitted pupils under the age of sixteen to remain out of school if no high school was maintained in the district of their residence. Under the old law a parent was not required to send his child outside the home district. The new act makes attendance compulsory up to the age of sixteen, whether the facilities are provided in the home town or in some other town the educational program of which is approved by the home town school committee.

Wisconsin required all schools to operate for a minimum term of nine months and made daily attendance compulsory for all pupils. Pennsylvania stipulated that every public school shall be in session at least 180 days per year, beginning in 1939. This state also required the yearly enumeration of children between the ages of six and eighteen and authorized the state superintendent of public instruction to order at his discretion a census of all minors up to the age of 21. It also provided for a five-year census of illiterate adults.

North Dakota took a backward step by stipulating that the school census shall be taken hereafter only biennially instead of annually. Arkansas authorized the state board of education to delay the school census enumeration in time of emergency. Maryland provided that colored schools shall be kept open not less than 180 days for each school year, beginning Sept. 1, 1939.

New York established qualifications for attendance officers and regulations for their appointment. Applicants must be in good physical condition and have completed a four-year course in an approved secondary school. Advanced education shall be considered in the grading of candidates for admission to the eligible lists. Experience in teaching or in social service work shall likewise be considered. Appointments must be made from among the first three applicants on the eligible list. Eligible lists shall be made after written and oral examinations conducted by the municipal civil service commission or by a board of school officers.

Provides Health Services

Pennsylvania specified that all school buildings hereafter built or rebuilt shall contain a health room for physical examinations and other health services. This state also authorized local provision for the care and treatment of pupils having defective hearing. The state will pay for the transportation of handicapped children to special classes. It also authorized the excusing of children from school attendance when examination by a competent psychologist reveals that they are mentally unfit to profit from further attendance.

West Virginia provided for compulsory vaccination for smallpox and diphtheria within the first month of school of all children entering school for the first time. A fine of not less than $10 or more than $50 is the penalty provided. Teachers must report

all pupils not immunized to the county health officer (or the county court when there is no full-time health officer). County authorities must appoint physicians to perform the immunizations, and fix their compensation. The work must be done at the expense of the county or municipality, as the case may be, and county health departments must furnish the biological materials free of charge.

Washington authorized school districts of the second and third class to employ a physician or a licensed public health nurse. Idaho expressly permitted the state department of public welfare, in the exercise of its public health functions, to cooperate with counties, municipalities, school districts and other state departments. Washington created a State Institute of Child Development, Research and Service at the University of Washington under the control of the board of regents and an advisory board of not more than seven faculty members. No money was appropriated for its support.

Plans New Study Units

The penchant of legislators for prescribing courses of study dies hard. Arkansas made compulsory a unit of instruction on alcohol and narcotics for grades three to eight inclusive. North Dakota made it mandatory for the superintendent of public instruction to include in the course of study for high schools an elective half-year course in cooperative marketing and consumers' cooperation. South Dakota stipulated that one-quarter hour of credit in the history of the state and one-quarter hour in state civics, or a passing mark in a teachers' examination in these subjects, shall hereafter be a prerequisite to obtaining an elementary school certificate. This does not apply to applications for renewals.

New York required the state education department to prescribe courses of instruction in highway safety and traffic regulation to be maintained and followed in all schools of the state.

Kansas abolished the state schoolbook commission and transferred its powers to the state board of education, at the same time increasing the membership of the board by adding the state printer and the state business manager. Provision is also made for the appointment by the state board of education of a textbook advisory committee of not more than nine members, a majority of whom must be active educators in elementary or high schools.

Nevada directed all boards of school trustees to provide school supplies to all pupils free of charge. This act extends the scope of a previous law providing for free textbooks and supplementary books for all pupils. Arkansas appropriated $650,000 with which to inaugurate the furnishing of free textbooks in the elementary grades. Seven per cent of the first $5,000,000 collected annually from the sales tax goes to the free textbook fund. North Carolina passed a permissive free textbook measure, creating a state textbook commission composed of the superintendent of public instruction as chairman, the attorney general, the director of the division of purchase and contract and two others members to be appointed by the governor for terms of two years. This body succeeds to all powers of the pre-existing state textbook purchase and rental commission. In addition the commission is to administer the proceeds of a $1,500,000 issue of state bonds to provide a free textbook system.

Florida enacted a law revising the process of selecting, purchasing and accounting for textbooks and instructional materials.

Revamps Transportation Laws

New Hampshire amended the statutes by adding a section requiring school districts to furnish transportation to pupils under the age of fourteen in grades above the eighth to an approved high school in some other district when the home district does not maintain high school facilities of its own.

North Dakota revamped the law on consolidation of schools so as to provide that district boards may call an election on the question on their own initiative, and must do so on petition of one-third of the voters of the district. After consolidation the board must pay to the parents of each elementary pupil of the consolidated school residing two miles away the sum of 5 cents per day for transportation. For greater distances the rate advances 5 cents for each quarter-mile, reaching $1 per day at 7 miles. The board may adopt the alternative of furnishing public transportation, or it may furnish board and lodging or tuition at some other school, if acceptable to the family.

Idaho authorized boards of common school trustees, in lieu of providing transportation, to assist parents in supplying board and lodging for any pupils living more than 1½ miles from school, whenever such boards believe this can be done at an expense equal to transportation cost. The maximum expenditure allowed out of public funds for either purpose is $10 per pupil per month.

South Dakota authorized school boards in districts containing twelve or more townships to purchase or build and maintain and operate dormitories. Kansas provided for the transportation of children attending parochial and private schools at public expense.

To Lessen Fire Hazards

Maryland required the use of non-shattering safety glass in all school busses purchased after June 1, 1937. It also authorized the state insurance commissioner to inspect schoolhouses and to compel school boards to supply sufficient fire escapes. Disobedience of his orders is a misdemeanor and after thirty days' notice he may close the buildings and the members of the school board may be arrested, and upon conviction fined from $25 to $100 for each offense, adding $5 for each day the offense continues.

North Carolina required all school bus drivers to have a certificate from the state highway patrol evidencing fitness and competency to operate motor vehicles for the transportation of children. The speed of loaded school busses was limited to thirty-five miles per hour and a fine of $50 or imprisonment for thirty days for violation was provided.

Oregon stipulated that school busses shall be inspected and approved by the commissioner of public utilities, who is authorized to adopt and enforce rules relating to the safety of their operation and equipment and to the qualifications and hours of service of each driver.

School Science and Public Needs

By BENJAMIN C. GRUENBERG

IN THE report on an earlier study of the place of science in adult education appeared this broad statement: "If society is to maintain its health and sanity, the public at large must either be trained to accept the guidance and direction of a special class . . . or else it must be trained to take part in the knowledge, the culture, the thought and the concepts upon which its civilization rests*."

This statement rests upon a multitude of assumptions and preconceptions. Obviously it is not subject to technical proof or practical demonstration. It leaves open only the alternative between an oligarchic or authoritarian conception of the good life on the one hand and what may be roughly designated as a democratic and scientific conception on the other.

Since I am interested in science, I accept the democratic alternative as alone compatible with what science has come to mean in the last three centuries, and especially within the past generation. It therefore becomes necessary to ask, How can the public be brought to more effective and more complete participation in certain phases of the science that is so characteristic of our present civilization?

The present study has to do with the teachers of science and their training. It consisted essentially of an extensive correspondence with some seventy men and women in this country, and a smaller number in England; and of interviews with scientists and educators in both countries. In the letters to the correspondents two questions were included:

1. To what extent are present teachers of science aware of the needs of the adult lay public, as distinguished from the needs of their high school or college students?

2. Where are science teachers being effectively trained to consider the attitudes of value to adults living in an age of science?

The science under consideration was intended to mean the science taught in nonprofessional or nonvocational classes or schools.

Considered judgments and comments of a relevant sort were received from forty-eight correspondents in this country. These replies do not lend themselves to statistical treatment. There is, nevertheless, a preponderance of agreement to the effect that "present teachers of science are not well aware of the needs of the adult lay public." Two or three assert that the needs of adults and those of the pupils are really the same; and several raise doubts as to whether science teachers are aware of the needs of their own high school or college students.

The most frequently recognized distinction between pupil needs and adult needs is seen in the restrictions imposed by examination boards, college entrance requirements, scholastic or administrative prescriptions and the like. A high school principal defends the acknowledged narrowness of the science instruction in his school by saying, "We owe an obligation to the pupils, whom we promise to prepare for college entrance examinations. There are many things that we may consider more important than the specific content of the chemistry syllabus, for example, but we have to do what we have been engaged to do."

Other comments, however, explicitly characterize this type of defense as an alibi. Teachers of science in the colleges as well as a large proportion of those engaged in the training of science teachers appear to agree that the actual teaching serves neither the pupils at the moment nor the future needs of these pupils as adults and as citizens. They agree that the supposed restrictions upon a more valuable kind of science teaching come only to a minor degree from the formal requirements of admission and examination bodies and should be attributed rather to the limitations of the teachers themselves.

Science pupils study an Indian skeleton. The problem is to make a practical application of the valuable knowledge obtained.

More than half these criticisms come from teachers of sciences and of other subjects in college, from university research scientists and teachers, from scientists engaged in university administration and from supervisors of science teaching. The implied deficiency among teachers of the sciences, especially in high schools, appears to be a reflection upon the selection and training of science teachers. It is therefore significant that substantially the same replies and comments were sent by the thirteen men engaged in the training of science teachers.

The most encouraging outcome of the study is the fact that most of the

*Gruenberg, Benjamin C.: Science and the Public Mind. New York: McGraw-Hill, 1935.

men in this last grup are conscious of serious shortcomings in the work of science teachers. These persons are ready to accept responsibility for these shortcomings so far as the training of teachers is concerned, and are actively trying to reorganize the training of science teachers on the basis of a comprehensive reexamination of the whole problem.

There is apparent a growing desire on the part of science teachers to make their instruction of value to the layman. The adult needs frequently mentioned as being definitely recognized by science teachers are the so-called consumer needs. These are not always clearly distinguished from the need of the ordinary adult to know something of the workings of familiar devices and processes, such as health rules, use of antiseptics, handling mechanical and electrical equipment of the home, growing flowers and knowing what questions to ask when buying a vacuum cleaner or a refrigerator. There is considerable instruction on the scientific principles embodied in various practical devices or applied in important technological processes. There is instruction on the danger of self-medication. And there is systematic cultivation of regard for the scientist as reliable authority.

Most commonly the science teacher's help to the prospective consumer is restricted to emphasizing the need for caution in responding to the claims of unscrupulous advertising, because of the discrepancies between these claims and the realities. There are numerous suggestions for the need to teach about the adulterations of specific fabrics or food products and about the misrepresentations of specific drugs and cosmetics.

It does not seem to be generally recognized among science teachers, however, that it is much easier to change the brand or the packaging of a commodity that has been discredited by such teaching than it is for the teachers to keep up with the procession of frauds.

The second emphasis was on the need for clarifying the social relationships that have been profoundly modified by the development of science. The most frequent adverse criticism directed against science teachers is their failure to serve adult needs in this area. It is only rarely that science teachers recognize their own needs, as adults, to understand the background of social and economic relationships in which science comes normally to be an instrument of fraud.

Rarely do teachers of the sciences understand how the cherished ethical and political traditions of freedom, initiative and individualism, which we ostensibly maintain for the protection of the individual and his interests, come, with the help of science, to ensnare and victimize him and leave him helpless and often bewildered.

Listed separately are neglected needs that science teaching might help to meet, such as understanding scientific method, acquiring a scientific outlook and understanding of the scientific world model, including the processes by which it is built up, and the limitations of these processes. Teachers of the special sciences appear to agree that these understandings, attitudes and outlooks are desirable, and to assume that such results normally follow from their teaching of special sciences.

Generalization Is Needed

Here, however, the critics are most outspoken. It should not be difficult to place on exhibition, in their support, an array of distinguished scientists who habitually deal with philosophic, social, economic and political questions either in terms of their own undergraduate instruction, or else in terms of the clichés at the moment prevalent in their respective social sets.

Since before the days of Tyndall and Faraday the advocates of science in education urged the need for these generalized understandings, attitudes and outlooks as essential to modern living. Science teachers may, nevertheless, concede their failure to bring about these results without apology. For, whereas the educational philosophy of the early period rested naïvely on a faculty psychology, science teachers today disclaim all responsibility by pointing to the scientifically supported doctrine that the effects of training are not transferred.

Chemistry does not make better citizens because it does not teach citizenship. Physics does not make better metaphysicians because it does not teach metaphysics. Moreover, the very specialization characteristic of scientific pursuits has so narrowed the field of competence and the obligations of the scientist that the teacher of science soon gets out of his depth and out of his province if he attempts to be helpful beyond the prescribed schedule of his services.

Our civilization at its best comprises an accumulation of potential resources, cultural and material, on the highest per capita level yet attained anywhere: but our actualities, even among the privileged who have

Through research this class in consumer needs is being brought to see the important place of the scientist in protection from fraud.

had access to higher education, are too often sordid and provincial. Since the techniques of scientific research require us to make observations and judgments uninfluenced by our personal likes and dislikes, we put ourselves in the absurd position of denying our very capacity to form judgments of value. Because we are so keenly aware of the dangers of ignorance and prejudice, we relegate to the professionally ignorant and self-seeking the power to make important decisions.

Our chemists and physicists know the precise details needed for meeting all our material wants, but our teachers of chemistry and physics must remain totally ignorant of the connection between their mastery of the material world and the prevalence of privation and squalor. The biologists know how we can get rid of diphtheria and rickets, but a teacher of biology must not know whose business it is to make use of all this knowledge. The geologist and the engineer know how dependent we are upon foreign minerals and domestic waters for ensuring the conditions of civilized living, but teachers of geology and engineering must not know what science has to do with public policy or international relations.

Certainly we may not ask teachers to teach what they do not know. With all the improvements and refinements in our school systems, it is fair to ask whether, as a body, science teachers have not left undone something of prime importance intimately related to science. The men consulted range from high school science teacher to university president. All but a few are directly engaged in the furthering of science and those few are distinctly friendly to science and scientists.

Why Science Has Failed

With minor qualifications in detail, they agree (1) that science has failed to make itself a vital part of our present day culture, in order to be felt in the public and private affairs of our contemporaries, and (2) that this failure is in large measure a reproach to our scientists and teachers of science.

Preparation of teachers, whether of the arts or of the sciences, includes, in addition to a considerable amount of instruction in specialized subject matter, a great deal of strictly technical or professional training such as the management of pupils, the handling of chalk and rulers, the keeping of records and so on.

These future teachers must decide whether our science teaching shall prepare our pupils for life or merely for college entrance.

Further, in our educational plan the preparing of scientists includes a considerable amount of instruction in specialized subject matter and a great deal of strictly technical or professional training such as the management of rabbits, the handling of chemicals or slide rules. It would seem desirable for men and women engaged in the teaching business and in the research business to have, in addition to their respective vocational equipments, some education as citizens, as cultivated and civilized human beings. They would then be equipped to take an active part in the civic, social and cultural life of their times.

It is true that every college graduate has normally had a course or two in civics and history or even some instruction in economics or sociology. It is equally true that our scientists and our teachers of science, as a class, apparently fail to understand the community and cultural processes in which our changing order enmeshes us as clearly as thousands of others who have not had the advantages of studying science. Except in the details that they manage as specialists, this group seems to share no more intelligently or effectively than others in these complex processes.

It may be no serious matter that scientists are ignorant and indifferent. Like the high school principal previously quoted, scientists try to do what they are hired to do. They seem to be quite capable of secreting potent mysteries without regard to the near or remote consequences that their hormones may bring about, without regard to the uses that masterful manipulators may make of them and their secretions. It does matter seriously, however, what teachers of science do with the crystallized hormones and what they teach their pupils to make of these explosive concentrates. Yet teachers get their science and their notions as to what science implies for our civilization from their science teachers —and the scientists.

Eventually it becomes necessary to ask ourselves what attitudes and values and appreciations we are cultivating through our education, in the training of scientists and teachers of science. All who teach science must be brought into more effective and more complete participation in the social processes that influence science and are in turn influenced by it.

Company's Coming!

By MYRON E. SMITH

THIS morning the school is alert to a new rhythm in the routine. Company is coming! The regular schedule has been telescoped and classes are brief with assignments crisp. Even the janitor has sensed the unusual and has taken an extra swipe along the baseboards.

At 10:30 o'clock two foreign busses pull into the curb and unload. In them are forty pupils from our neighboring school 18 miles down the turnpike—a mixed chorus to sing an abbreviated version of "The Rose Maiden"—friendly guests with a gracious gift.

The auditorium is hushed as the curtain drifts open. Then for an hour our pupil assembly is an eager audience, a courteous and appreciative host.

During the current year our school has listened to three such exchange programs—from Minneota, Marshall and Hendricks, Minn. Three times our own groups have played the rôle of performing guest to neighboring assemblies. In our auditorium we have enjoyed one-act plays, extemporaneous speakers, vocal soloists, instrumental chamber music and choral singing. Our next guest, Clarkfield, Minn., is promising a full concert band.

Another prospective guest has scheduled a boys' physical education demonstration in expert tumbling. Before long our own school will send out a girls' physical education team demonstrating the graceful rhythms of Danish gymnastics as opposed to the abrupt military calisthenics of Sweden. We also may send our chemistry instructor who has worked out an intriguing program with dry ice. The possibility of variation in such exchange programs is as rich and varied as the treasure of talent in every school.

The educational values of these school exchange programs are obvious and indisputable. On the part of the performers such programs supply a magic stimulus to what might otherwise become tedious practice toward perfection. Pupils are eager to be included in the caravan to near-by schools. The appearance before large

Minnesota neighbors exchange visits—Marshall High School brings its band (above) and Canby repays in kind with its surpliced mixed chorus.

Exchange Programs Help Take Curse Off Interscholastic Sport Relations

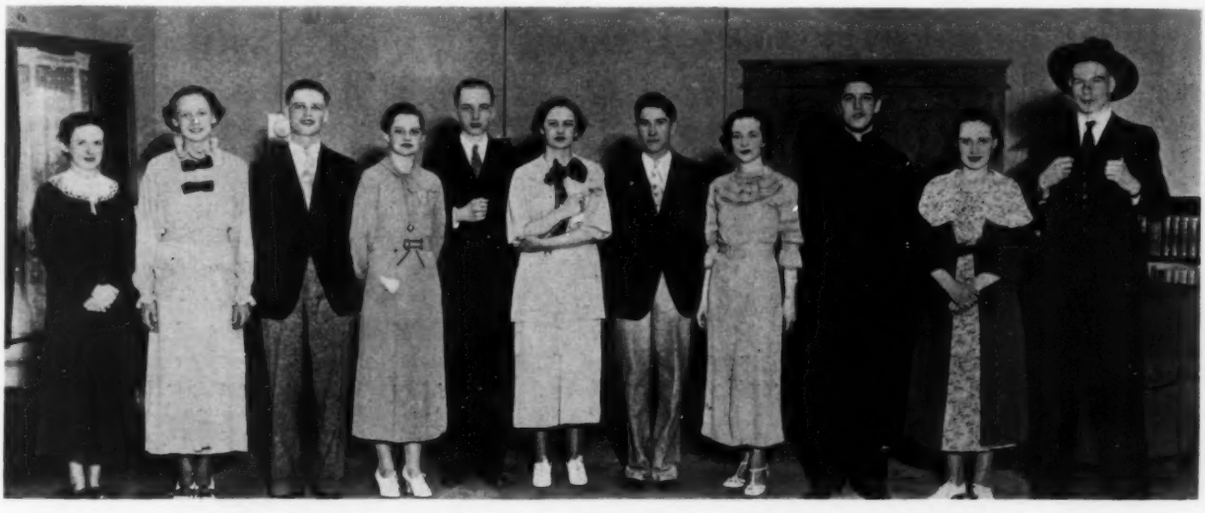
audiences develops confidence, assurance, and poise.

On the part of the audience the values are even more salutary, probably because the assembled school is given the more subtle rôle of host. In this rôle pupils exhibit a generous hospitality and a gracious geniality never apparent when schools meet in strictly competitive enterprise. Tenseness and other evidence of animosity are absent because nonexistent. Therein lies the prime value of school exchange programs. Erstwhile competitors for a moment forget combat and discover their opponent to be a likeable fellow. The cordial reception, the attentive audience, the friendly intermingling of pupils after the program, the banter and laughter attest the charm of this new found fellowship.

To be sure, our school has relished athletic competition. We have labored to plan our strategy with Apache cunning. We have sought to encourage our warriors with the finest yells in the Comanche repertoire. Occasionally we have come off with a belt full of trophies. Quite as frequently we have dreamed of Empire, then like the sleek Roman become the easy victim of some marauding horde of leather-armored Visigoths. The salient point, however, is that we also have thrilled to the quiet hour in the auditorium, as host and hostess to our neighbors. We have journeyed to their schools to come on their platform a bit timorous and apprehensive. We have experienced the mystic surge of confidence as we sensed courtesy and good will.

Modern interscholastic relationships are too much restricted to contests and tournaments. The competitive idea motivates. Only recently have some few schools sought, in the festival idea, to release music from the I-win-you-lose, what-a-great-boy-am-I complex. Knighthood in flower was tournament minded, but the modern school has forgotten the flower. Even the plumed knights of old took time out to school themselves in the graces of gallantry. Perhaps that's the answer, chivalry!

Anyway, next month's calendar has a date outlined in red. There goes the band! Company's coming!



Hendricks High School produces an operetta in full costume, while the home high school juniors repeat their successful class play at Hendricks.

Down With Delinquency

Adventures in Cooperative Recreation

By VIRGIL M. ROGERS

ABOUT two years ago we in Boulder, Colo., became concerned with the problem of delinquency in our community to the extent of appointing a committee representing the service clubs to cooperate with the superintendent of schools and the city manager to work out ways and means of cutting down the number of juvenile offenses. Maj. George Braden and Glenn Grant of the National Recreation Association met with this committee on several occasions, giving advice and suggestions from their rich background of experience gained in pioneering in this field.

Under the direction of the school administration a survey of juvenile court records was made by WPA research workers. Significant findings resulted; significant chiefly as they pointed to the causes of juvenile delinquency.

It was discovered that juvenile offenses constantly increased with the deepening of the depression and that misconduct consisted largely of pilfering and theft by boys who had no opportunity to earn money and no recreation to occupy their leisure time. The typical ages of offenders ranged from fourteen to sixteen years. Many other pertinent facts which pointed the need for community-wide organization to attack the problems involved were gathered by the committee.

After two years of careful study the committee recommended a plan of organization which provided for a recreation commission financed jointly by the board of education, the city council and the Young Men's Christian Association.

The plan has been approved by the city and a full-time director of recreation on a year-round basis has been employed. We feel that Boulder is on the way toward solving its problems in recreation for both youths and adults.

With slight revision, the constitution of the Boulder Recreation Association is given in full.

Preamble

Recognizing the need in the city of Boulder for more adequate facilities for recreation, the board of education, the city council and the Young Men's Christian Association hereby enter into an agreement to provide and maintain a proper community-wide program of recreation.

To this end the foregoing organizations approve the provisions contained in these articles of organization, to be known as the "Constitution of the Boulder Recreation Association."

The foregoing organizations agree to support the program financially in a cooperative enterprise as each body sees fit, taking into consideration the recommendations of the controlling board of the recreation association.

Board of Directors

The association shall be under the control of a board of directors composed of seven members. The membership of the board shall include the city manager, the superintendent of schools, one other person approved by the city council, one other person approved by the board of education, two members of the Young Men's Christian Association, and one other person elected by the recreation council.

General Powers

The commission is empowered:

1. To employ a full-time executive director of recreation whose salary shall be paid jointly by the city of Boulder, the board of education, School District No. 3 and the Young Men's Christian Association.

2. To define the powers and prescribe the duties of all officers and employees.

3. To approve all assistants assigned to work under the supervision of the director.

4. To supervise the expenditure of all monies provided for recreation and properly to account for the same to the city council, the board of education and the Young Men's Christian Association.

5. To arrange with city and school authorities for making available, for a citywide recreation program, all property and equipment suitable for recreation.

6. To give continuous and collective thought to the leisure-time problems of the entire city and to work out effective means of meeting these problems.

7. To elect officers to carry on the business of the association, and to make such other rules and regulations as may be necessary to carry out the objectives of this association.

Council

The board of directors may invite organizations in the city to select representatives from their groups to represent them on the recreation council. The council shall elect one of its members to serve on the board of directors. Council members may be called upon by the board of directors to meet and confer upon problems related to the recreation program. The council shall act in an advisory capacity to the board of directors. Final authority in all matters shall reside with the board of directors.

This constitution shall become effective when approved by the board of education, the city council, and the Young Men's Christian Association which comprise the association.

THE SCHOOL PLANT

Dream Fulfilled

By WILLIAM E. GILLIS and R. W. FOOTE

Front entrance of high school at East Haven, Conn., erected at a cost of 22 cents per cubic foot, or a total cost of $418,000.

MANY a school man has dreamed of what he would do if given the opportunity to develop a school program, select teachers and help to plan the physical features of a school that had no traditions or other impediments, if we may call them that.

We in East Haven, Conn., were confronted with a situation that approximated this ideal. The town had a total school population of 2,200, of whom 500 were on the four-year high school level, yet we had no high school of our own. The number of high school pupils was small even a few years ago and it seemed wiser and more economical to send the pupils to New Haven's high schools.

These schools were overcrowded and had to resort to double sessions. The academic high school had the largest enrollment in the state. Some felt that, despite the fine record of these schools and the excellent cooperation shown by the faculty, our pupils were handicapped inasmuch as they left our small elementary schools with their intimate contacts to travel four miles or more to a school housing several thousand.

Here was an opportunity to share in the planning of a complete high school plant with a curriculum, a staff and selection of working materials and equipment. Plans to fit the times called for a program and a philosophy of education different than the pure college entrance type. However, the question most often asked was: "How can you prepare the boys and girls for college?" The attitude on this question alone threatened to defeat the move for a modern, roomy and economical high school.

With the decision made for the building of a school it was essential to lay out a general plan as to the type of instruction needed and the kind of building necessary to carry out such a plan. It was decided that proper precautions should be taken in order that the academic group might receive courses under the preparatory curriculum.

East Haven has practically no business openings for the younger people. They must seek positions in New Haven in competition with graduates of the commercial high where business is the field of the entire school. We must, then, prepare a group for business, but on a small scale because of the cost of equipment, with a program of gradual, systematic development.

The largest number of pupils, however, will seek neither further halls of learning nor business careers. They will go their various ways as has been so well described by Dr. Ernest Butterfield. A civic curriculum was outlined for this ever increasing group so that art, manual arts, home-making and practical social sciences would be available under the direction of teachers who are in sympathy with this trend.

The faculty consists of twenty-five full-time and four part-time teachers about equally divided as to sex. All teachers believe in the value of the extracurricular and social activities that help to build personality and ability to get along with others.

The site chosen is two blocks from the main trunk line of the town on a street that has little traffic and no noise. It is situated on a level piece of land 6½ acres in area.

Ground was broken on March 2, 1936, and school was opened in the following September, in order to save expense of paying tuition elsewhere. The aim was accomplished although some of the equipment was not ready until a much later date.

The architect had planned several other large high schools as well as some college buildings and he was ready to accept suggestions concerning the educational phases at all times in order to make the building useful as well as ornamental. Visits to new schools in New York, Connecticut, Rhode Island and Massachusetts preceded detailed planning.

The building costs were as follows: building $340,000; equipment $42,000; architect's fee $18,000, and land $18,000. Of the total of $418,000

Home-making class in cooking, showing part of equipment. In the physics room, an electric panel distributes current to work tables.

the town has to pay approximately $230,000 while a PWA grant of $188,000 was furnished by the federal government.

The main portion or classroom section of the building is three stories high and 60 by 275 feet. It contains 757,191 cubic feet, erected at a cost of 24 cents per cubic foot. The remaining 753,338 cubic feet cost 20 cents a cubic foot. Average cost per cubic foot was 22 cents.

The architecture is of colonial design with all of the classrooms in the front section. The auditorium forms

The auditorium (above), with a seating capacity of 1,000, is reached through the main school lobby. The stage measures 28 by 50 feet. Like all others, the chemistry room (left) is provided with an abundance of tack board. A large portion of the student body is served complete or partial meals in the spotless cafeteria (below). The cafeteria is used as a study hall most of the day, the kitchen and counter being completely shut off from it. Delivery trucks have access to the kitchen by means of a drive which circles the building.

the center and the gymnasium is at the rear. There are two wings containing the cafeteria and shop on the first floors, while the shower and locker rooms are on the second floor. The boiler room is in a section set aside from the main body of the building.

There are slightly more than 1,000 pupil stations. In addition to thirty-one classrooms and special rooms there are the library, offices, faculty rooms, gymnasium, cafeteria and shop. One feature of the building is a provision for double the number now enrolled, so that there should be no curtailing of the program for a long period of time.

The front section construction is reenforced concrete while the gymnasium, auditorium and tower are of steel girder construction. All the floors are covered with asphalt tile made up of two shades of brown. The noise resisting quality of this is aided by the sound absorbent material used as ceiling material in all parts of the building.

Natural Lighting Excellent

The windows are double hung, ventilating type and the ratio of window area to floor space is more generous than required by law, so that the lighting conditions are excellent. There is combination steel buck and trim. All lockers are of the flush type located in the corridors and are equipped with combination locks, master-keyed and have changeable combinations.

The first floor main section contains the offices and a few regular classrooms. Here are also located the home-making and art rooms. The cooking room has gas stoves, refrigerator, cabinets and five units with stainless steel tops.

In the sewing room the cutting table and instructor's desk serve in a double capacity in that they contain rows of drawers for keeping pupils' materials. The drawers are controlled by keys, one to each row. When a division reports, the rows assigned to it are unlocked and the drawers removed and used at the working stations until the close of the period. They are then returned and locked. This is convenient and saves space.

The main auditorium is on the ground floor reached through the main school lobby. It has a curved pitched floor without gallery. The room is plain but artistically treated with wainscot, cornices and an acoustical tile ceiling. The stage is 28 by 50 feet, provided with footlights, border lights, spot lights and standard auditorium equipment. Ceiling and wall lights are of the flush type.

The two sides of the auditorium are flanked by corridors having two exits on each side. Another set of exits leads directly outside. There are also exits backstage.

No Duplication in Dressing Rooms

The seating capacity is 1,000. A door at the rear of the stage offers ready passage for scenery to be transported to a scenery storage room just across a corridor. In lieu of special dressing rooms, use is made of the physical education dressing rooms, which are conveniently located.

The kitchen has modern and complete equipment. There are the usual steam table and other appliances connected with the counter. These are done in stainless steel.

The cafeteria serves complete and partial meals to a large portion of the student body. The room is used as a study hall most of the day and can be used successfully as such because the kitchen and counter are completely shut off from the cafeteria when desired. Delivery trucks have direct access to the kitchen by means of a drive circling the building.

The wing opposite the cafeteria is 50 by 88 feet and houses the shop. This department is just being built up and has but one instructor. Because of this the equipment is set up in one room without partitions. As the department grows partitions can be erected. Thus without moving any equipment there will be facilities for wood work, electrical work, auto mechanics, sheet metal work and machine shop.

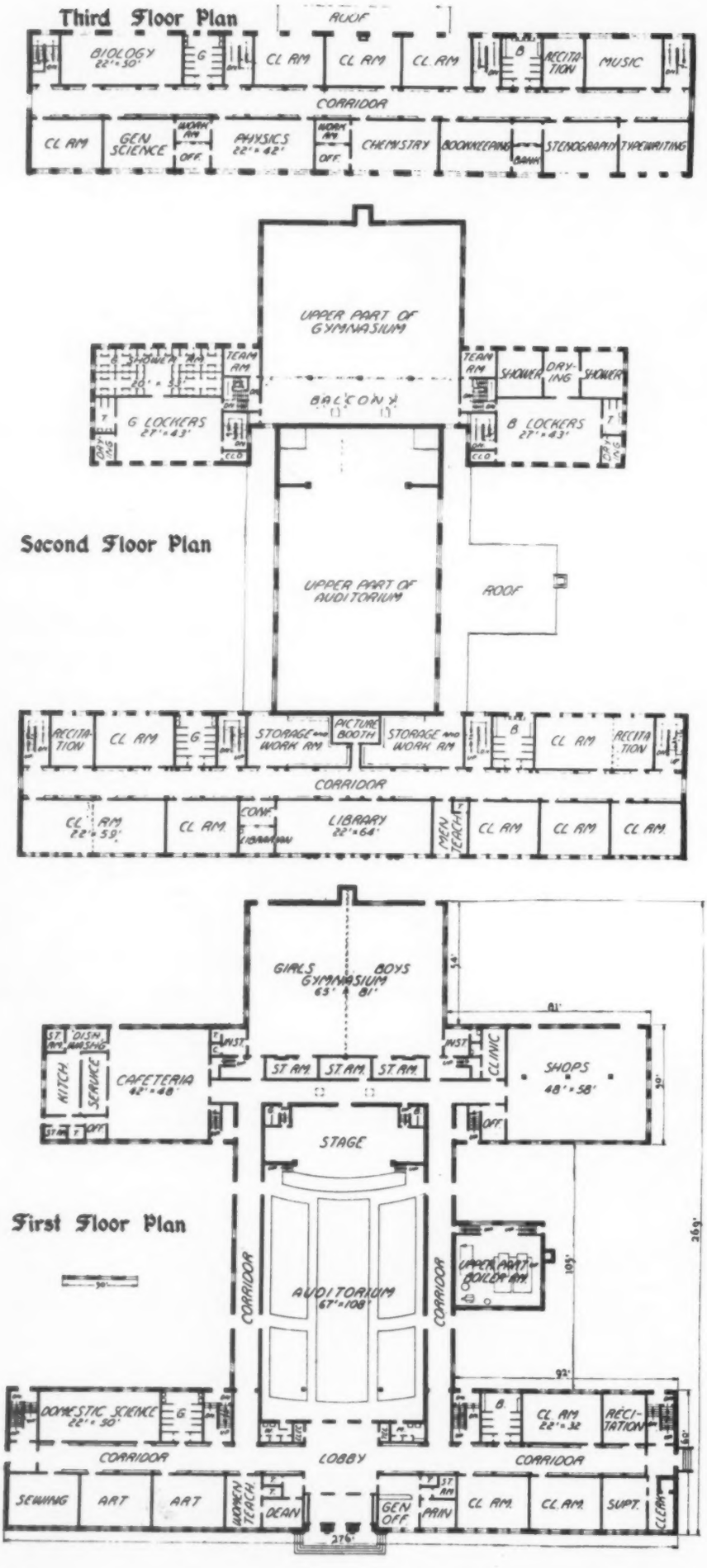
The gymnasium floor, 82 by 66 feet, is made up of short sections set in mastic and placed on waterproofed concrete. A balcony will be partitioned off and used for recreational activities. Part of the gymnasium floor and the balcony are used for portable bleachers to seat 850 additional persons during the basket ball season. Provisions call for two separate gymnasiums made possible by a folding partition.

The gymnasium leads directly on to the athletic field. There is a definite social program, based on the relative location of the cafeteria, gymnasium and athletic field.

Noon Recreation Provided

At the end of each lunch period there is time for social dancing in the gymnasium with music furnished through the radio system. Table tennis and shuffle board are available in the balcony and when weather permits horseshoe pitching and other activities are carried on outside. On Friday afternoons and on Saturdays socials are held in the gymnasium

Display cases, models, aquariums and a germinating bed comprise the equipment for the biology room (above). Stainless steel throughout stamps the kitchen (right) as modern. The gymnasium floor (below. left) measures 82 by 66 feet, and the unpartitioned shop (below, right) measures 50 by 88 feet.



and refreshments served from the cafeteria.

Entrances to both the cafeteria and gymnasium are apart from the main building. Toilet facilities connected with the stage are available to game patrons, making it unnecessary to open the main building.

The second floor is made up of the library and classrooms for those subjects that need reference work. The spacious, well lighted library is directly over the entrance. At one side of it are located three rooms for the social studies. At the other side are three rooms for English classes. Two of these rooms are separated by a folding partition so that they may be used for class meetings and gatherings which might otherwise call for the use of the auditorium. Future plans call for a small platform for public speaking and dramatics and the necessary equipment for visual aids. This will take the place of the auditorium in many ways when thus equipped.

The third floor has the commercial and science departments in addition to a few rooms for other classes. Rooms are available for stenography, typewriting and other business subjects. Between the typewriting and bookkeeping room is a small room used for machines, banking and office practice.

Science Equipment Is Modern

Tablet arm chairs are used for recitation purposes in the science rooms, and space is provided for additional laboratory equipment. The instructors have ample office and storage space connected with their classrooms. There are connecting doors between the general science and physics rooms so that instructors may have ready access to the apparatus and supplies.

The biology room has display cases, models, aquariums and a germinating bed for starting plants that are later used in various parts of the building.

The physics and general science rooms have second beat clocks for time experiments. In the physics laboratory is an electric panel that distributes A.C. and D.C. electricity to the various tables in any necessary range of voltage.

The heating plant is a separate unit on the westerly side of the audi-

torium. It contains two large boilers with oil burners, with a 10,000-gallon oil storage tank located outside of the building. For hot water service a 2,000-gallon copper lined storage tank is provided, furnishing hot water to all showers, sinks and lavatories. The heating system is the low pressure vacuum type. The ventilating system is of the forced exhaust type with the tower used as a vent. This tower is useful in this respect and is also a thing of beauty with its white structure topped by a gold dome.

Storage facilities are ample. A room off the general office provides for storage of materials and books often needed on short notice. On the second floor, opposite the library, are two well lighted large rooms that will take care of our needs for years to come. One of these is used for text and library storage while the other is used for instructional and janitors' supplies. There are two storage rooms off the gymnasium and one just across from the rear of the stage.

With the exception of two rooms the furniture is of the movable type. The typewriting and stenography rooms have fixed furniture. The latter room is so equipped that when we must have an additional typewriting room the furniture will be of the same type.

Flexible Seating Arrangements

We have used some single, some double and some triple tables and have found that flexibility in fitting the needs of certain rooms is an asset. The teachers have tried different seating arrangements to fit their needs. For economy some special subject rooms are equipped with regular furniture. As the enrollment increases and more rooms are to be furnished the regular furniture will be replaced by the special equipment.

Lighting, fire alarm equipment and toilet facilities are adequate and modern. Shower rooms for the girls are individual with partitions made of rust resisting aluminum alloy. Individual baskets are used in the dressing rooms. The boys' showers consist of two units, each with twelve showers. In addition to the drying and dressing rooms there are team and storage rooms.

The time system consists of a master clock with a metal drum for program adjustment. There is also a control for the six available circuits so that any room or combination of rooms may be plugged into a circuit or taken from a circuit.

Many rooms are equipped with map molding for use of maps needed for a short period at a time. The main supply of maps is kept in one of the storerooms. This room is adjacent to the rooms most in need of such material. All rooms are equipped with an abundance of tack board. There are numerous bulletin boards and one display case is located near the library.

A speaker system has two radio channels and two-way communication between rooms and office and from room to room. Microphone stations are located in the principal's office, in the auditorium and gymnasium. Daily notices are broadcast and a weekly news program, covering local and national events, is written and announced by pupils. Phonograph programs can be broadcast to any part of the building. The system is efficient and is in constant use. It has been used to some extent as a means of supervision without any adverse faculty reaction.

The building is becoming the community center of the town and has something to offer the adult as well as members of the younger generation.

Banishing Toilet Odors

A THOROUGH cleaning system supplemented by plenty of fresh air and sunlight will ensure odorless toilet rooms. Keeping slimy material and accumulations of dirt from the grooves and crevices of bowls and urinals will eliminate practically all odors. For this reason there should be as few grooves and ornamental work on the plumbing fixtures as possible.

Drain pipes from urinals are frequently the source of bad odors and consequently require special attention. Occasionally it is helpful to use a little dissolved sewer pipe cleaner to remove the organic material that collects. Water should then be run through the pipe. Care should be taken in selecting a cleaner that will not harm the appearance of the fixtures or the piping with which it comes in contact.

Sometimes disinfectant is essential. This should be added to the cleaning solution that is used for toilet seats and should be as odorless as possible. Chlorine tablets dissolve easily and the odor is not as penetrating as carbolic acid or ammonia. A good disinfectant should be a germicide. Deodorants too frequently are used merely to disguise the bad odors emanating from toilets.

Walls and ceilings of toilets require constant attention to keep them immaculately clean. Their cleaning should not be left until the end of the week, but should be made a daily task.

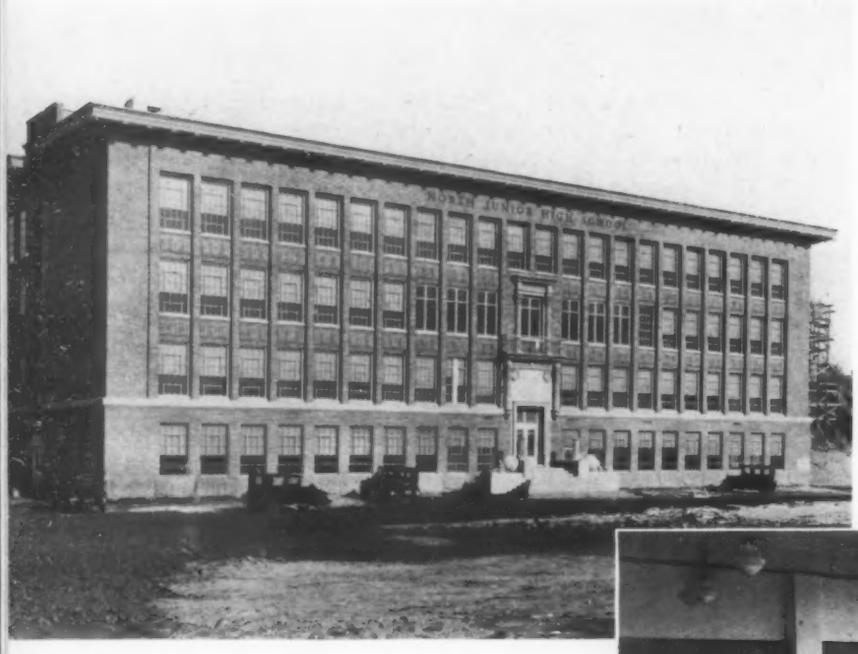
The entire procedure comprises sweeping, scrubbing and mopping the floors; cleaning the bowls, urinals, lavatories, sinks, woodwork, walls, mirrors and ceilings, and seeing that there is an adequate flow of water from the faucets, tanks, drain bowls and lavatories at all times.

Detached Toilets

When inside water flush closets cannot be installed, a satisfactory type of toilet for rural communities is the sanitary pit closet recommended by the Oregon Department of Public Instruction.

This type of toilet consists of an earth pit, 5 or 6 feet deep, cribbed with timber, over which is placed a reenforced concrete slab and riser which rests on concrete foundations or footings. This unit is equipped with a well constructed fly-tight seat with a self-closing lid. Odors from the pit are carried away by a 4-inch galvanized metal vent pipe.

The buildings placed over these units may be attractive, well ventilated and easy to keep clean. When one earth pit is filled, the entire unit can be moved and reassembled over another pit at a minimum expense.



It Took

By JOHN RITCHIE

Before North High School, Quincy, Mass., took wings. The enlarged building contains spacious commercial rooms (right) arranged in the manner of a modern business office.

QUINCY, MASS., with a population of about 75,000, the birthplace of a goodly number of American statesmen, and well known to the world for its leadership in the granite and other industries, is a community of business men, notable for a number of useful public services on the part of the municipality.

Early in 1925 the citizens began the discussion of improvement of school facilities in the northern section of the city, and by July the movement assumed definite form. A site was chosen, which having been occupied by an old-time schoolhouse, served educational history and tradition. Architects selected to consider the matter suggested that a high school be built in three units at three different times as the need might arise. The original plans were drawn in accordance with this idea, the central unit to supply what was needed at the moment, with two wings, east and west, to be built in the future as the necessity for space became evident.

These plans were acceptable to the citizens of Quincy, construction was begun, and in 1926 the central unit was completed and dedicated. It was intended to care for 800 pupils, and on the day of opening, was filled to capacity.

This central unit contains the auditorium; gymnasiums for boys and girls, with accessory lavatories and dressing rooms; a library with reminiscences of city history in its leaded windows and decorative fireplace in stone, and a large study, in addition to the classrooms.

Special features are the shops, rooms for the domestic arts, a spacious cooking room, with an adjoining lunchroom and the utilities, including space for the heating plant for the entire school building when completed and for fuel storage. These are placed on the ground floor, the major portion of which is taken up by the auditorium. With the entrance opposite the central doorway of the first floor, the floor slopes down to the level of the basement floor, resting on the ground, and eliminating the fire risk that accompanies rooms and storage spaces placed below such halls. On the upper floor there are special halls for the commercial studies and science and drawing.

Early in 1930 the growth of the school population warranted the construction of one of the wings sketched in the original comprehensive plans, and the east wing was built, which increased the capacity to 1,500 pupils. So popular was the North High School with the people that in 1935 it was necessary to complete in detail the original plans for the second or

Wings

As the building stands today with east and west wings added.

west wing and to proceed with the construction. It has been occupied for some months, already caring for 2,300 pupils, with an ultimate capacity of 3,000.

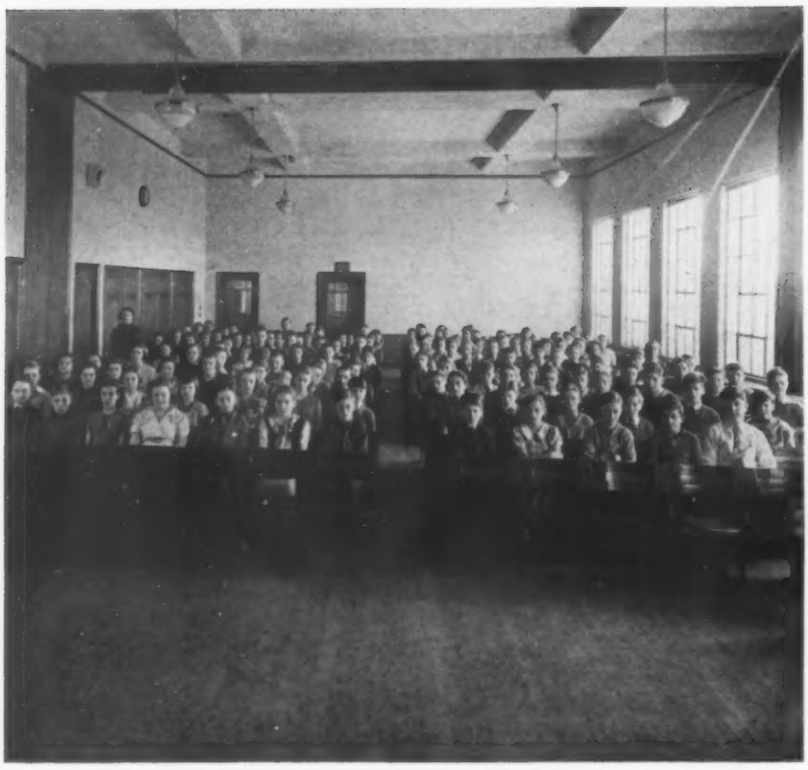
An important matter, which is especially cared for in the planning of this school, lies in provisions for the safety of the occupants. On each floor there is a central corridor, 10 feet in width running the entire length of the building, with four widely separated stairways connecting all floors. These have iron steps and are enclosed, with smokeproof doors and nonchoke exits. The corridors themselves are of fireproof construction. The auditorium has a number of exits in addition to the main entrance at the central doorway of the building.

The school presents a number of interesting features of convenience, which are the more interesting when one considers the time, ten years ago, of the original planning and the rapid march of progress, for example, the heating system. There was introduced a radical departure from the old-fashioned method of "driven hot air" from a central fan. Separate heating units were installed in the different rooms, placed below the windows and taking the air from outdoors through grilles in the wall.

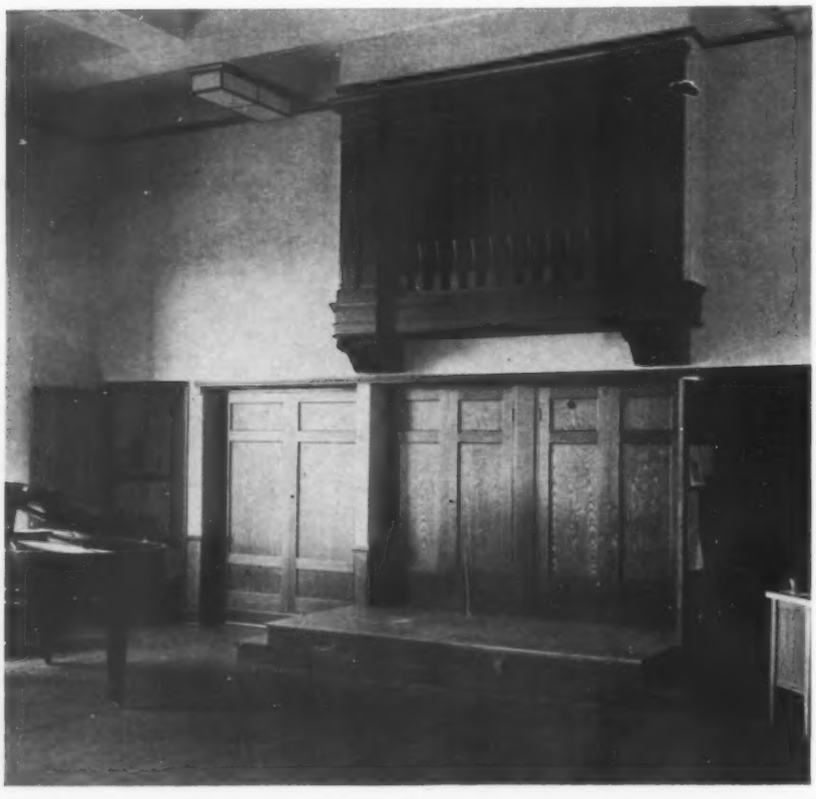
Anothed unique installation was the public address system. This was highly successful from the day of the opening of the central unit, and has been kept constantly in line with the rapid improvements of successive years.

The central unit has a front line of 180 feet, and the wings average 130

Library (above) is reminiscent of city history in its leaded windows. Reallocation of space permitted enlargement of school shops (right).



Music suite includes two large rooms separated by a folding partition forming one hall for a moderate sized audience. Below is shown the platform for musicians. An auditorium type of loud-speaker is provided and the walls are acoustically plastered.



feet each. The depth is in general some 60 feet, with the auditorium-gymnasium section running back about 200 feet. There are three floors and a basement, the lay of the land being such that the last-named has the effect, space and illumination of a fourth story. Such an arrangement means economy in construction. In addition to the twenty classrooms of the central unit, the wings furnish twenty-four classrooms and studios, eight devoted to commercial work, two music studios, two art studios, five laboratories, four extra large shops and five rooms in which varied special work is conducted.

The music suite includes two large rooms separated by a folding partition, making when needed one hall for a moderately large audience. This is fitted with a platform for musicians and auditorium type loud-speaker. The room surfaces are acoustically plastered and the ceiling is beamed and fitted with special lighting fixtures. The commercial rooms are of large size, simulating a business atmosphere in the general arrangement and in the massing of employees by departments.

As might be expected some reallocation of space seemed desirable when the wings were built, and enlargement of shops and of rooms devoted to domestic arts was among these changes.

The completed structure is an attractive building in brick with stone trimmings, the inclined wings of which add to the architectural effect. The three-story decoration of the principal entrance, together with the decorated panels of the end sections, gives the building a remarkable exterior, which is heightened by sculptured groups, the product of one of Quincy's own artists. A triangular lawn in front of the building serves to increase the beauty, since the schoolhouse can be viewed from sufficient distance to make an impressive whole.

The North High School stands as a sterling example of the splendid manner in which a community may provide for its educational needs by timely consideration and comprehensive planning. Its successful completion makes an outstanding example of early detailed planning for the future needs of a growing community.

Tacoma's Five-Year Plan

By CARL G. CADDEY

THE public schools of Tacoma, Wash., have an insurance reserve fund of $217,606, a fund relatively large for a school district of its size; and it has been both a blessing and a trial.

Is this amount considered adequate? As an insurance fund in the strictest sense, no. As a reserve fund with earnings with which to purchase fire insurance, it is quite satisfactory.

What amount should be considered as an adequate fire insurance reserve fund? This is dependent upon a school district's potential financial ability to replace its largest building of ordinary construction, regardless of its own fire loss record, and regardless of statistics of loss recovery to premiums of school districts in general.

Measuring the Protection

The Tacoma schools, for example, have a most favorable loss record. Buildings have been built, used until obsolete and torn down, but never has a building's usefulness been terminated by fire. In the thirty-five-year period from 1901 to 1936, the Tacoma schools paid $109,910 in fire insurance premiums for partial coverage, with a loss recovery of only $5,637 and with no one fire loss exceeding $1,900. Yet, under the present financial condition of the school district and the community, it would not be wise to take a chance on the loss of any one of the larger buildings.

There are two high schools, one of the insurable value of $541,000 and the other of the value of $480,000, and these must be the measure of the insurance program. Both buildings are overcrowded, and in the event of a total loss of either, which is not inconceivable, replacement with modern construction would cost in the neighborhood of a million dollars. Even with full coverage such a loss would leave a serious financial problem.

The fund was started in 1914 and was built up by investment earnings and the proceeds of an annual tax from one-tenth to one-half of a mill levied in addition to the millage allowed for maintenance and operation until 1933 when the right to levy the extra tax was eliminated by a state tax limitation law. Up to 1932 when the fund had reached $189,373 some insurance was always carried on each building, with little fear of a heavy loss and with the hope of having sufficient insurance to recover in full from insurance for any ordinary fire. The greater hazards were insured as high as 40 per cent to value, with an average on all buildings of 17 per cent.

Under this plan the fund served as excess coverage and was protected from small losses, but the amounts paid for the protection afforded were relatively high. That year the policy was reversed and the whole fund was considered as insurance applicable to every building, a policy more consistent with the purpose of the fund. As an added protection, insurance of $62,100 and $194,400 was purchased on the two greatest risks with coverage, including the fund, to value of 46 per cent and 80 per cent respectively. This gave a large amount of protection at a small expenditure but it left the fund in danger of extinction in case of a bad fire loss, a result not inconsistent with the principle of an insurance fund, but one, it is feared, that might not have been understood or accepted by many taxpayers had a very heavy loss occurred.

A plan for using the earnings of its large fire insurance reserve fund to finance full fire protection has been devised by the school board of Tacoma, Wash. Unusually low rates were obtained by purchasing five-year coverage.

During the same period considerable difficulty was experienced in keeping the fund profitably invested because of the limitations and inflexibility of the investment provisions of the law governing the fund. The problem was, however, partly solved by making temporary interest-bearing loans to the district's general fund, which was on a warrant basis. The fund then served doubly during the later depression years as an insurance reserve and as a stabilization fund for the district's warrants; and the fact that the district's warrants were never once subject to discount during the depression is due almost entirely to the insurance reserve fund.

Five-Year Rate Plan

Early in 1936 insurance rates were down 30 per cent, more favorable rulings were received broadening the investment possibilities and sanctioning the use of the earnings of the fund for fire insurance premiums. A plan for full fire insurance to be financed largely from the earnings of the fund became feasible. On the other hand, a more stringent state tax limitation law had been enacted making it difficult or almost impossible for a school district to finance any new construction either by bond issue or by extra millage, and full coverage became more advisable.

School properties were appraised at $4,691,302 and given a "90 per cent average rate of $.873" for five years. Coverage for five years straight was purchased to retain the low rates for the entire period and to avoid an annual distribution problem. The premiums were met by financing the remainder through a local bank after crediting returned premiums, earnings on hand of the insurance fund and a small amount from the general fund. The bank, which holds the policies for security, will receive semiannual payments. The five-year program is costing $36,866.79 in premiums and

$2,809.17 in interest, a total of $39,675.96. The sum of $34,854.55, or 88 per cent of this cost, is being borne by the earnings of the fund and the balance by the general fund.

The difficulties frequently met in the distribution of insurance were avoided or at least minimized by keeping the insurance agents and the public fully advised from the start. Recognizing the need of expert advice, the Insurance Exchange, an agents' association including many but not all of the fire insurance agents of the city, was asked to appoint a committee to assist in the study of the district's fire insurance needs. A letter, which had been prepared in advance, was sent to the many agents on our fire insurance list timed to reach them simultaneously with press reports of the proposed survey. The letter, giving the names of the committee, called attention to the fact that the function of the committee was advisory only, that if the study resulted in additional insurance such insurance would be "divided according to some fair and equitable plan among the established and going fire insurance agencies of the city, regardless of membership or nonmembership in the Insurance Exchange," and that all decisions as to the amount and distribution of the insurance would be made by the school board. Application blanks in brief form were enclosed, and as a result telephone inquiries were few.

After the appraisal and survey were completed and the amount of insurance decided, the ninety-nine agencies applying were divided into six groups representative of their standing in the fire insurance and casualty lines, based upon estimates of their premium writings, their self-classification in the Insurance Exchange for dues-paying purposes, and such other data as were obtainable. Policies from sound mutual companies were accepted the same as from sound stock companies. The graduation in allocation of amounts was then decided as follows:

Group 1	5 agencies each	$250,000	$1,250,000
Group 2	2 agencies each	150,000	300,000
Group 3	8 agencies each	100,000	800,000
Group 4	19 agencies each	50,000	950,000
Group 5	11 agencies each	25,000	275,000
Group 6	54 agencies each	12,000	648,000
Total	99		$4,223,000

Tacoma now has full fire insurance protection against any loss, and at little expense to the general fund, but possibly we have departed from the principle of an insurance reserve fund.

Rules for Bus Drivers

TO PROMOTE the safety of pupils while being transported to and from school in busses, the University of the State of New York has formulated and printed safety regulations for drivers and pupils for distribution to school officials and drivers of school busses.

The regulations follow:

Minimum age. All drivers of school transportation conveyances must be at least twenty-one years of age.

Maximum age. There is no stated maximum age limit. It is expected, however, that all drivers of school transportation conveyances will be well within the active period of life.

Physical fitness. All drivers of school transportation conveyances must be free from physical defects that would tend to lessen their ability to operate a vehicle safely under the conditions incident to the particular route.

Required licenses. Each driver of a motor vehicle conveying school children over a strictly rural route must have an operator's license to operate such motor vehicle.

Each driver of a motor vehicle conveying school children over any route that enters a city is required to have an official chauffeur's license.

Character requirement. The driver of a vehicle for the transportation of school children must be of good moral character and thoroughly reliable.

Custody of children. In view of the fact that transported children are, by the very nature of the situation, in the custody of the driver, all drivers of school transportation vehicles are expected to be tactful in the management of children.

Rules affecting pupils. Drivers must not allow pupils to enter or leave a bus while it is motion.

Drivers are held responsible for reasonable behavior of pupils in transit.

Drivers must not allow pupils to thrust their heads or arms out of open windows.

In cases in which it is necessary for pupils to cross a highway in order to board a bus or after leaving a bus, such pupils should await a signal from the driver before crossing such highway. It shall be the responsibility of the driver to ascertain that the highway is clear before signaling the pupils to cross.

Gas tanks are never to be filled while pupils are in the bus.

Driving rules. Drivers must obey all traffic laws and regulations.

Drivers must observe all traffic signs and signals.

Drivers must make a full stop at all railroad crossings and at state highways before crossing.

Drivers must make a full stop and give warning before making a left-hand turn.

Drivers must not leave vehicles without first stopping the motor and setting the emergency brakes.

Cleaning Porcelain

Water in which there is a high iron content frequently leaves an objectionable stain on drinking fountains and lavatories. To effect its removal acid treatment which is hard on the fixtures is often used. Generally this comprises a weak solution of muriatic acid with plenty of rinse water. An alternative method, according to the engineering extension service of Iowa State College, depends on mechanical abrasive action. Fine abrasive powder or steel wool is used. Most important, however, is the removal of the stains daily so that they do not build up.

Grease may be removed from porcelain by the application of kerosene or gasoline.

Charts Tell the Food Story

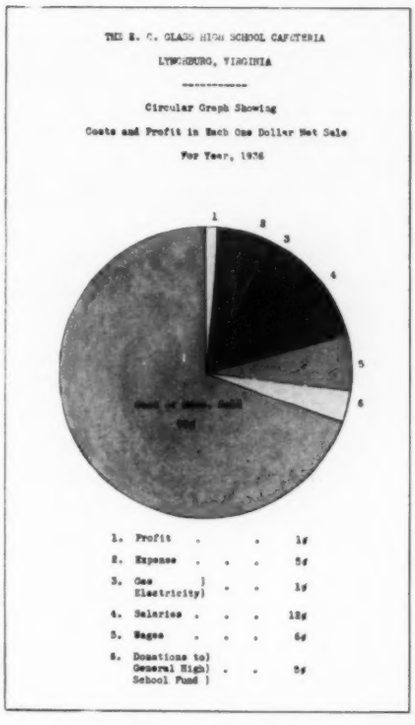
By E. F. BURMAHLN

IN 1925 there was set up for the cafeteria of the E. C. Glass Senior High School, Lynchburg, Va., a thoroughly comprehensive accounting system. At that time the total capital was around $117, with the board of education contributing now and then when the manager could not make ends meet. The purpose of this system was so to arrange the finances of the department and organize its services that at any time it would be possible through charts, diagrams, graphs and statements to get an accurate picture of the entire operation. The result is an efficient and dependable system of food control enabling those responsible to offer an unusual variety of good food at low cost to the 900 children who eat in the lunchroom daily.

Before starting to analyze the lunchroom routine as practiced at the E. C. Glass Senior High School, attention should be directed to the fact that the average daily pupil check is 8½ cents, and that 78 per cent of the children purchase lunch daily in the cafeteria. All foods are sold at 5 cents each, there being but a few 1-cent candy items.

For each month of the school year a complete set of statements is prepared such as those for February, 1937, accompanying this article, showing assets and liabilities, also inventories, accruals and depreciations and profit and loss. At the end of the year the totals are compiled, thus depicting the entire year's operations. It is particularly noteworthy that these figures actually charge off depreciation.

Then there are job analysis sheets, statements of receipts and disbursements, and of food inventory. A complete monthly inventory includes the description of the item, the quantity on hand, price, unit and the extension showing the value of the item on hand. Inventory covers all foods, silverware, china and glass, kitchen furniture and equipment, food library, office supplies, cafeteria equipment and cafeteria furniture. The food library to which reference is made furnishes ideas to the cafeteria director.


THE E. C. GLASS HIGH SCHOOL CAFETERIA

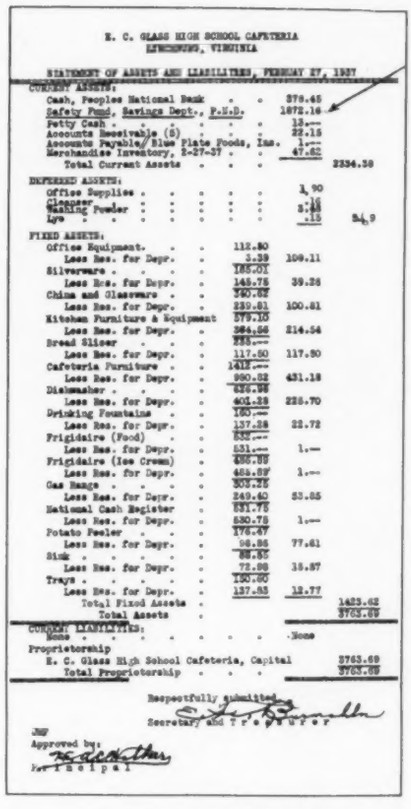
LYNCHBURG, VIRGINIA

Circular Graph Showing

Costs and Profit in Each One Dollar Net Sale

For Year, 1936

1. Profit . . . 1¢
2. Expense . . . 5¢
3. Gas) Electricity) . . 1¢
4. Salaries . . . 12¢
5. Wages . . . 6¢
6. Donations to) General High) School Fund) . . 3¢


E. C. GLASS HIGH SCHOOL CAFETERIA
LYNCHBURG, VIRGINIA

STATEMENT OF ASSETS AND LIABILITIES, FEBRUARY 27, 1937

CURRENT ASSETS:
Cash, Peoples National Bank . . 378.45
Safety Fund, Savings Dept., P.N.B. 1872.16
Petty Cash 13.--
Accounts Receivable (5) . . . 22.15
Accounts Payable/Blue Plate Foods, Inc. 1.--
Merchandise Inventory, 2-27-37 . . 47.62
Total Current Assets . . . 2334.38

DEFERRED ASSETS:
Office Supplies 1.90
Cleanser 16
Washing Powder 2.45
Lye 15 4.49

FIXED ASSETS:
Office Equipment . . 112.80
Less Res. for Depr. . 3.39 109.11
Silverware . . . 185.01
Less Res. for Depr. . 145.75 39.26
China and Glassware . 340.82
Less Res. for Depr. . 239.81 100.81
Kitchen Furniture & Equipment 579.10
Less Res. for Depr. . 364.56 214.54
Bread Slicer . . . 235.--
Less Res. for Depr. . 117.50 117.50
Cafeteria Furniture . 1411.--
Less Res. for Depr. . 980.32 431.18
Dishwasher 625.98
Less Res. for Depr. . 401.28 224.70
Drinking Fountains . 160.--
Less Res. for Depr. . 137.28 22.72
Frigidaire (Food) . 232.--
Less Res. for Depr. . 231.--- 1.--
Frigidaire (Ice Cream) . 486.89
Less Res. for Depr. . 485.89 1.--
Gas Range 303.74
Less Res. for Depr. . 249.40 53.85
National Cash Register . 231.78
Less Res. for Depr. . 230.78 1.--
Potato Peeler . . . 176.47
Less Res. for Depr. . 98.86 77.61
Sink 88.35
Less Res. for Depr. . 72.98 15.37
Trays 190.80
Less Res. for Depr. . 137.83 12.77
Total Fixed Assets . 1423.62
Total Assets . 3763.89

CURRENT LIABILITIES:
None . . . . . None

Proprietorship
E. C. Glass High School Cafeteria, Capital 3763.89
Total Proprietorship . . . 3763.89

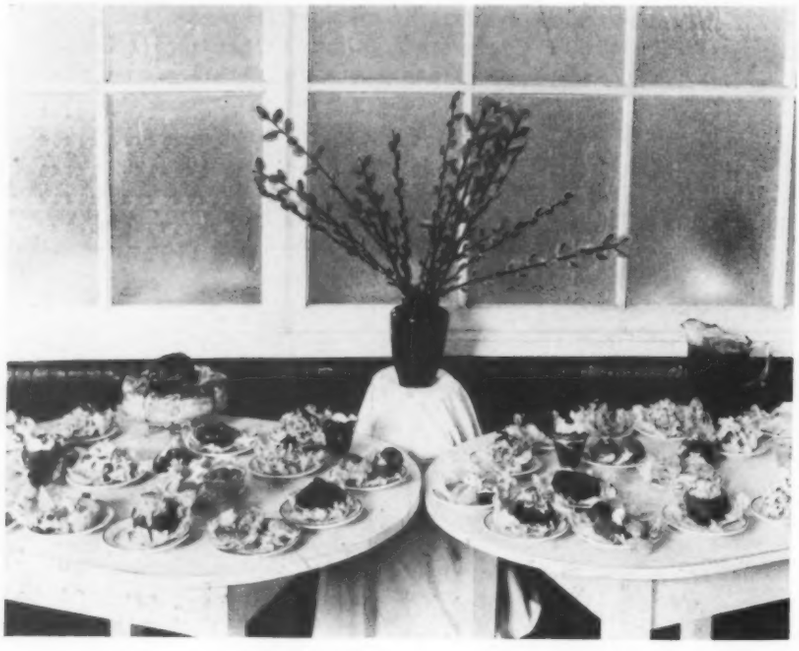
Respectfully submitted,
Secretary and Treasurer

JMF
Approved by:
Principal

Scientific control and supervision are essential for a healthy state of finances in the school cafeteria. Charts are excellent indicators.

Gross sales for the year 1936 were $12,471.78, for 175 school days. Other income from purchases discount and interest amounted to $57.50. Of this income $8,680.70 was spent for food, and $3,083.98 for operating expenses. The sum of $582.52 was donated to the general high school fund, leaving a net profit to the cafeteria of $182.13. The accompanying circular graph shows the costs and profit in each one dollar net sale. Under "expense" are included the following items: depreciation, $496.41; miscellaneous supplies, $40.72; repairs, $29.33; cleansers, $23.64, and laundry, $15.76.

The following summary and comparative statements are prepared each year: statement of receipts and disbursements; statement of disbursements, accounts payable proof; statement of sales average per day; bar graph showing gross sales for each month in school year; summary statement of profit and loss; circular graph showing cost and profit in each $1 sale; summary statement, inventories, accruals and depreciations; comparative statement, inventories, accruals and depreciations showing for two years; comparative statement of sales average per day for two years; comparative bar graph showing gross sales for each month in school year for two years; comparative balance sheet for two years;



Part of the comprehensive accounting system of this high school lunchroom are these statements which give an accurate picture of the entire operation, with the ratio of profit.

vertical bar graph showing comparison of sales for ten years, comparative enrollment for ten years and yearly days of operation for ten years; comparative statement of profit and loss for two years; circular graph showing costs and profit in each $1 sale for two years; sales, operating costs, expenses, purchases discount and net operating profit for the year, shown by months; job analysis sheet; schedule of individuals receiving noon luncheon for cafeteria services rendered.

The cafeteria personnel comprises in addition to the cafeteria director, the supervisor and secretary and accountant, a sandwich maker and four colored employees who are on the pay roll at the rate of $24.50 per week, or $98 per month. This is the total amount for all four. Their hours are from 8:30 in the morning until 2 or 3 p.m., depending upon the day's outlay. The wages are Southern wages for colored folk and for the amount of time represented are as top-notch as they are able to get practically anywhere in the state. The remainder of the work is carried on by pupil employees who are paid in lunches only at the rate of 25 cents for the noon hour lunch.

It is interesting to note the job analysis for employees. In addition to making sandwiches, a white woman helps in the kitchen at recess and

E. C. GLASS HIGH SCHOOL CAFETERIA

LYNCHBURG, VIRGINIA

STATEMENT OF PROFIT AND LOSS, FEBRUARY 27, 1937

			RATIO
RETURNS FROM SALES:			
Gross Sales (19 days)	1476.43		
Total Sales		1476.43	100.00%
COST OF GOODS SOLD:			
Merchandise Inventory, 2-1-37	26.16		01.77
Add Purchases	1061.39		71.89
Cost of Goods Available for Sale	1087.55		73.66%
Less Mdse. Inventory, 2-27-37	-47.62		3.22
Cost of Goods Sold		1039.93	70.44%
Gross Profit on Sales		436.50	29.56%
OPERATING EXPENSES:			
Electricity	1.75		.11
Expense	60.87		4.12
Gas	12.55		.85
Salaries	155.--		10.56
Wages	98.--		6.63
Total Operating Expenses		328.17	22.77%
Net Profit from Operations		108.33	7.39%
OTHER INCOME:			
Purchases Discount	2.44		.16
Total Other Income		2.44	.16
Net Profit		110.77	7.55%

PROOF

E. C. Glass High School Cafeteria, Present Capital, 2-27-37		3763.69
E. C. Glass High School Cafeteria, Capital, 2-1-37	3652.92	
Plus Net Profit, 2-27-37	110.77	

Respectfully submitted,

EMC — Secretary and Treasurer

Approved by:

Principal

E. C. GLASS HIGH SCHOOL CAFETERIA

LYNCHBURG, VIRGINIA

STATEMENT OF INVENTORIES, ACCRUALS, AND DEPRECIATIONS, FEBRUARY 27, 1937

INVENTORIES: (Food)-(Schedule 2-a)		47.62
DEFERRED ASSETS:		
Cleanser (2Boxes @ .08)	.16	
Washing Powder (¼ Bbl. @ 6.81)	3.40	
(2 Boxes @ .04)	.08	
Lye (1 Box @ .15)	.15	
Office Supplies	1.90	
Total Deferred Assets		5.69
ACCRUALS:		
None		--.--
DEPRECIATIONS		
Silverware**	.37	
China & Glassware**	.55	
Kitchen Furniture and Equipment**	3.50	
Bread Slicer*	2.35	
Cafeteria Furniture (Fixed)*	14.12	
Dishwasher*	6.27	
Drinking Fountains (2)*	1.60	
Gas Range*	3.03	
Potato Peeler*	1.76	
Sink*	.89	
Trays*	1.51	
Office Equipment:		
Sunstrand Adding Machine	1.13	
Total Depreciations		37.08

**Net actual loss by count 1% each school month or 10% a year of the cost

Respectfully submitted,

ACB — Secretary and Treasurer

Approved by:

Principal

serves the girls. Colored employee No. 1 makes twenty-four turnover ham sandwiches, butters rolls, arranges counters, washes dishes, scours behind counters and front of stove daily, serves in teachers' room in first recess and washes dishes in second recess. Employee No. 2 makes sandwiches, grinds meats, serves girls, cleans tables and scours every Wednesday and Thursday in cafeteria. Employee No. 3 cooks, serves boys, clears tables, washes dishes and scours every day behind serving counters. Employee No. 4 makes salads, washes dishes, washes floor in front of stove and helps in general.

Now for the job analysis for pupils. There is first an ice cream pupil service comprising three boys who serve block ice cream and keep the ice cream refrigerator clean during the serving periods. They carry trays from the kitchen to the ice cream counter and help there in general.

Displayed in tempting array are desserts such as date pudding, cherry roll, fresh fruit cup, strawberry shortcake, banana, lemon, custard and apple pie, which appear on the daily menu.

MENU FOR FIVE DAYS IN APRIL, 1937, AT E. C. GLASS HIGH SCHOOL CAFETERIA, LYNCHBURG, VA.

Meats	*Vegetables*	*Salads*	*Desserts*
Chicken pie Meat loaf	Black-eyed peas New cabbage Escalloped onions Succotash	Fresh grapefruit Pineapple and banana Shrimp Tomato and egg Vegetable Waldorf	Cherry roll Chocolate ice-box cake Date pudding Fresh fruit cup Pineapple upside-down cake Strawberry shortcake (old fashioned) Pies: Banana, custard, brown sugar, lemon, sliced apple
Hamburger cakes Stuffed veal chops	Butter beans Fresh snaps New beets Escalloped potatoes	Chicken Deviled egg Fresh pineapple fruit cup Pea and carrot Potato Tomato	Baked custard Chocolate pudding Fresh strawberries (with cake) Pineapple delight Lemon ice-box cake Strawberry dumplings Pies: Apple, butterscotch, pecan
Fresh spare ribs Meat pie Salmon croquettes	Baked stuffed squash Boiled onions Brussels sprouts Butter beans with tomatoes Peas and carrots	Coleslaw Cucumber and tomato Grapefruit and orange Deviled egg Potato Prune and cheese Stuffed celery Waldorf	Apple roll Apricot whip Graham cracker pudding Maple nut ice-box cake Peanut angel roll with whipped cream Pineapple Bavarian cream Steamed chocolate pudding Strawberry shortcake Pies: Chocolate, butterscotch, sliced apple
Baked shad Roast beef Salmon loaf	Fresh June peas Creamed celery Stuffed peppers Spinach	Salmon Health Ribbon Grapefruit and cheese Potato Asparagus Vegetable	Banana pudding Chocolate mousse Fruit cup Macaroon pudding Strawberry shortcake Pies: Brown sugar, cherry, apple, coconut cream, sweet potato
Chicken à la king (on toast) Creamed dried beef	Black-eyed peas Buttered potatoes Fried squash Cauliflower New snaps	Coleslaw Combination fruit Date and apricot Health Pear and cheese Potato Tomato and cucumber	Baked custard Brown Betty Chocolate ice-box cake Date pudding Pineapple upside-down cake Strawberry roll Pies: Butterscotch, cheese, lemon, pecan

Next comes the general pupil service, comprising twelve girls and one boy. Suppose we take them in their order. No. 1 helps make sandwiches and assists in the teachers' room; No. 2 helps prepare vegetables and serves hot potatoes at recess; No. 3 helps prepare vegetables and dries trays; No. 4 helps one of the colored employees and washes glasses; No. 5 helps make sandwiches and dries dishes; No. 6 fills peanut bags and washes and dries silver; No. 7 helps make sandwiches and washes and dries glasses; No. 8 helps in kitchen and waits on girls at recess; No. 9 helps make sandwiches and assists in teachers' room; No. 10 is a general helper; No. 11 helps the cook generally and takes used dishes to kitchen; No. 12 also helps the cook in the kitchen, and gathers used dishes and carries them to the kitchen; No. 13 helps make sandwiches and serves vegetables in boys' line.

Four pupils serve as cashiers. Side register slips are taken, when used, out of the register and placed on the register for principal's secretary. The boys' register attendant fixes the pay roll on Friday. Cash only — that is, legal tender money — is accepted.

Responsibility for illegal receipts rests with the cashier of each register. Particular care is urged against slugged dimes and Canadian money. Petty cash or change is not rung up. Each register change is put up by those counting daily receipts, properly labeled as to amount and for what register. I — Boys' register: $4 (6 quarters, 13 dimes, 21 nickels, 15 pennies). II — Girls' register: $4.75 (6 quarters, 18 dimes, 25 nickels, 20 pennies). III — Girls' side line register: $2.70 (3 quarters, 10 dimes, 16 nickels, 15 pennies). IV — Teachers' register: $1.55 (2 quarters, 5 dimes, 8 nickels, 15 pennies). Total: $13.

Each cashier counts his register change daily and places it in his particular register. The boys' register attendant rechecks all four registers daily before business hours to make certain that no money has been rung up since the clearance of registers by the principal's secretary of the day before. Cashiers are on duty five minutes before lines form. The captain of cashiers helps on the monthly cafeteria food inventory sheet.

Finally there are five special aids. One collects mail and invoices for the cafeteria director and accountant during the fourth period. Two of them record and take figures out of the four cash registers (one acting as verifier) and report to the tellers in the athletic office at the beginning of the sixth period. They figure the average meal cost per individual, the number of pupils served, and the per cent served. The fourth member of this group serves as teller in the sixth period, and the fifth acts as bank messenger in the seventh period.

Menus prepared by Mrs. D. M. Davis, cafeteria director, are excellent in selection and variety of food offered. A group has been selected at random from five days in the month of April, 1937.

The proportion of food purchases for milk and ice cream run about 10 per cent, which may be low, but the pupils prefer their hot vegetable soup. Then the school makes its own lemon and grape punch with an excellent foundation. There is also the sale of orange drinks. With only 10 to 15 cents to spend pupils naturally go in for the heavier foods.

There are other schools in Lynchburg serving lunch, but there is no central organization. Through the schools' Free Lunch Fund under the auspices of the PWA at least nine different schools are served food, which is cooked at a central kitchen at one school.

Figures reveal the facts. This is just as true in cafeteria management as in everything else. They show an exceptionally healthy condition in the lunchroom at the E. C. Glass Senior High School, reflecting scientific control and efficient supervision.

FOOD FOR THOUGHT

• Cafeteria directors and teachers of home economics are frequently asked to give pupil guidance on professional opportunities in food administration. Two recent publications that will be of aid to them and to inquiring pupils are the following: "Dietetics as an Occupation" by Cleo Murtland and "If You Are Considering Food Administration" by Alice J. Kirk. Each pamphlet contains a bibliography and each is priced at 10 cents. The Murtland booklet is available from the National Occupational Conference, New York City, and the Kirk discussion from the Rochester Athenaeum and Mechanics Institute, Rochester, N. Y.

• When the new cafeteria at the Wasco Elementary School, Wasco, Calif., is completed the pupils will be instructed in the value of eating an orderly and unhurried lunch.

This school lunchroom began in 1921 as a P.-T. A. project. During the depression when so many needy children received free lunches the Wasco Welfare League contributed to the fund. A cook was employed, and a woman member of the teaching staff acted as cashier in addition to her own duties. Since 1934 the board of trustees has managed the lunchroom on a nonprofit basis, food and salary of cook being the only items charged against income.

The lunchroom has been averaging 200 meals a day, and will accommodate only about sixty pupils. When the new cafeteria is completed the school band will use it as a classroom. This room will be large enough for public meetings and gatherings, thus eliminating the expense of lighting the large auditorium.

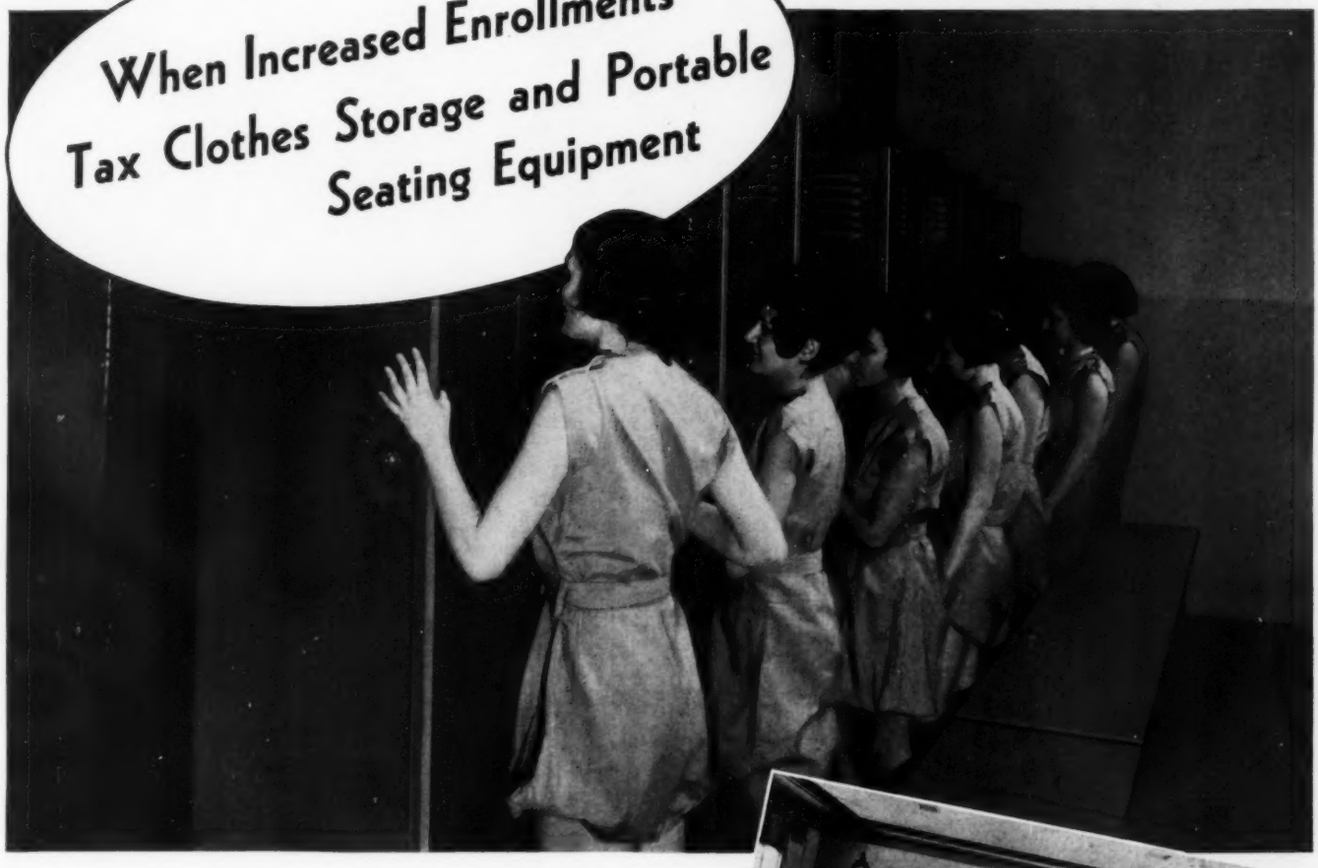
During the past year the lunchroom has shown a small profit. The receipts were $4,055.15; the total disbursements were $3,832.35, which included $1,554.90 for groceries, $1,266.50 for creamery products, $199.40 for bread; $811.55, salary of cook.

• A simple plan for supplementing the rural child's lunch with that necessary hot dish is offered in the *Oklahoma Teacher*.

Each school pupil is asked to bring a cup and spoon, which may be taken home each day or left at the school. Turns may be taken among the older boys and girls in washing the dishes that are left at school. Cocoa, beans, vegetable soup, creamy potato soup, tomato soup, rice or cereal, with bread, crackers or cookies are served. If milk is needed it is donated by different members of the community in turn. The food may be prepared in part before school, during recess and occasionally during school by the older girls. If a kitchen is not a part of the school's equipment, this dish may be prepared on top of the heating stove. Each child may give 10 cents a week to defray the cost of the food, or it can easily be financed in some other way.

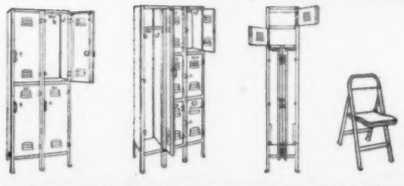
When Increased Enrollments Tax Clothes Storage and Portable Seating Equipment

Manhattan College, Brooklyn, N. Y.



● If increased enrollments necessitate additional steel lockers or steel folding chairs Lyon is prepared to give you prompt service. There is a type of locker for every purpose: elementary school classroom Cloakrobes; gymnasiums; High School and Junior High corridor lockers; domestic science and manual training lockers. Of particular interest to schools planning to add to their portable seating equipment are the revolutionary comfort and health protecting features embodied in the new Lyon "Correct Posture" Folding Chair. Mail coupon for complete details on latest Lyon Locker and Folding Chair developments, and the helpful suggestions of our school equipment specialists.

Houston Public Schools, Houston, Texas



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Light for Easier Seeing

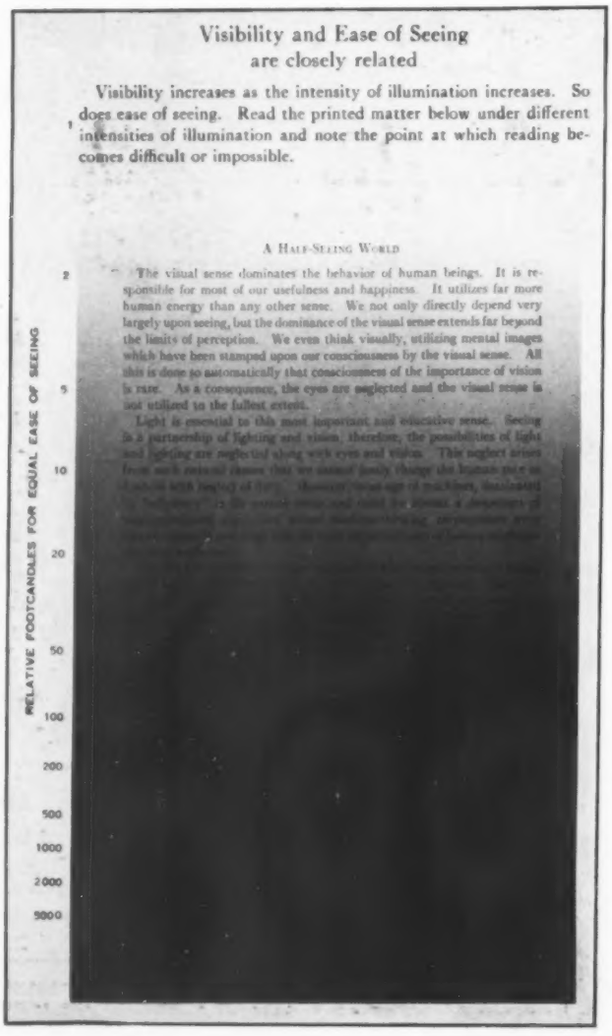
By W. G. DARLEY

THE visibility of any object depends largely upon four fundamental and controllable factors. Size is important, since the larger the object the more easily it can be seen. The effect of contrast is apparent from the difficulty encountered in reading a textbook printed with black ink on dark gray paper (Fig. 1). Careful analysis of the eye reveals functions similar to a camera, thereby making time a factor in the task of seeing. The fourth principal factor is brightness, reflected or transmitted light, without which we are not able to see.

Results of laboratory research show the relationships that exist between these four factors for an illumination range of 0 to 100 foot candles on white backgrounds, or of 0 to 1,000 foot candles on dark gray backgrounds (Fig. 2). These data indicate that as the illumination, therefore the brightness, is increased: (a) small type becomes as visible as larger type; (b) printed matter with poor contrast between printing and paper becomes as visible as material with higher contrast, and (c) the eye, like the camera, makes its retinal impressions more rapidly.

By providing illuminations on the different visual tasks in the classroom in accordance with individual requirements, as determined with a visibility meter (Fig. 3), it would be possible to establish a uniform degree of visibility. In practice this is not feasible at the present time. Instead, a certain degree of visibility can be chosen as the basis for minimum ease of seeing in the classroom. By providing the value of illumination required for the most difficult visual task, the educator would be assured that pupils would not have to perform any visual tasks of more than the predetermined severity.

Of course, if this value is determined for the pupils with normal eyes, less than the minimum ease of seeing would be provided for the children in the classroom handi-



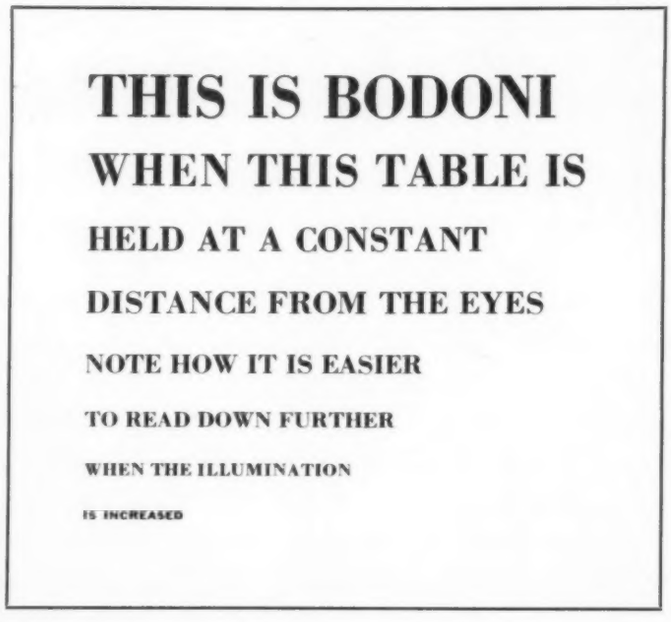


Fig. 1 — With the aid of the visual tasks here given, the reader can perform simple experiments to observe the influence of light upon ease of seeing for various conditions of size and contrast.

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The sketches show why—show the relative space occupied by a tire on the road compared with the sole of a man's shoe. Little difference in area.

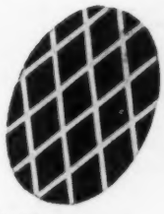
Yet, while the average man weighs 160 pounds and travels at about 3 miles an hour—your busses weigh several thousand pounds and travel at ½ to ¾ miles or more per minute.

So think of the chances taken in emergencies or on wet, muddy or icy roads with anything less than the safest, surest-gripping tires made.

No other tires offer protection against skidding comparable to the famous, time-proved Goodyear All-Weather Tread. Too, Goodyears give you the greatest known insurance against blowouts—Supertwist Cord—*blowout protection in every ply.*

Play safe. Specify Goodyears on new busses or for replacements whether the equipment is your own or on contract.

UNFAILING BLOWOUT PROTECTION—With Goodyear LifeGuard* Tubes blowouts are rendered as harmless as slow leaks. If a blowout should occur—the "inner tire" supports the load and enables the driver to bring the bus to a safe stop under full control.



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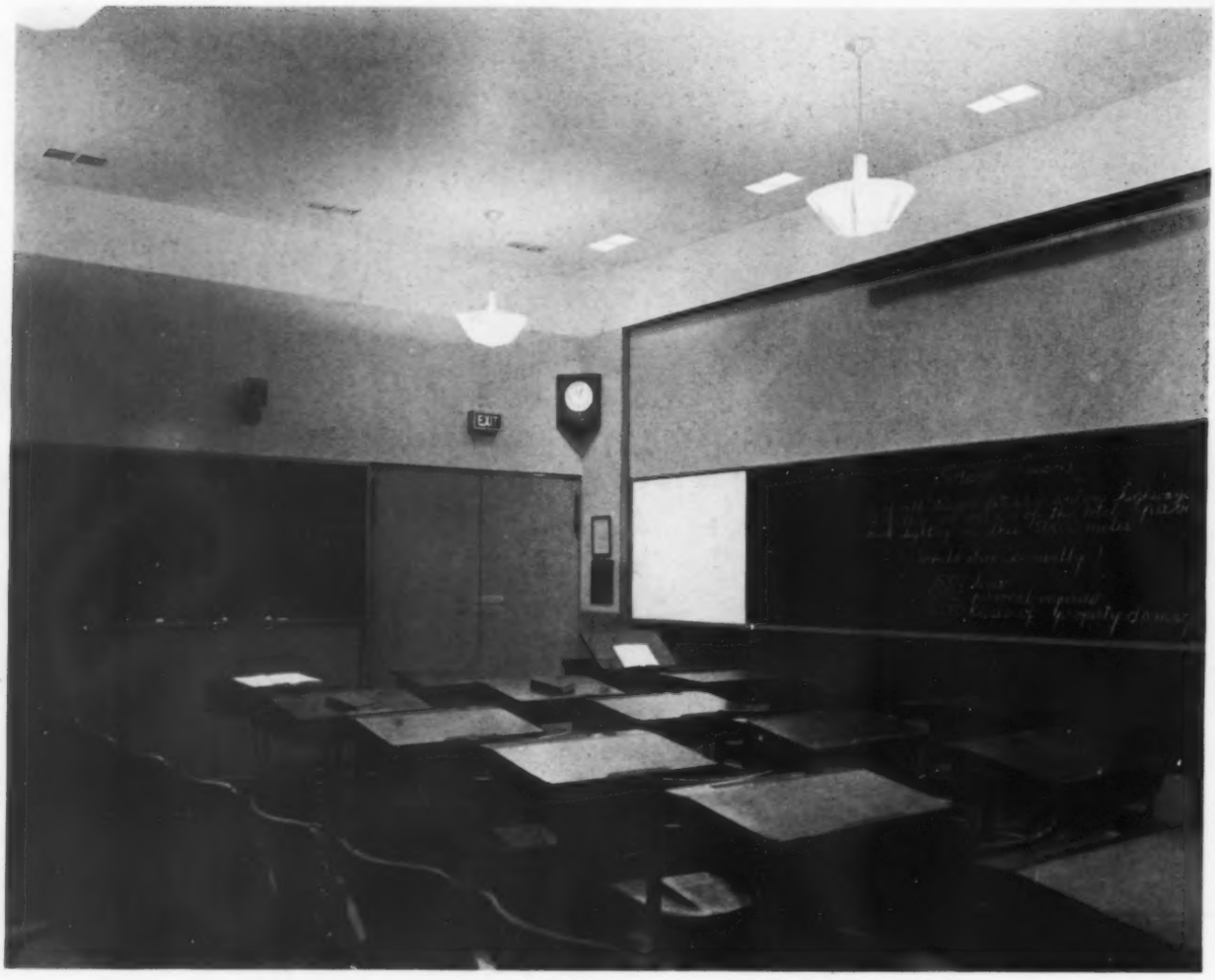

Fig. 4 — Flush-mounted and surface-mounted installations of lens-plate units.

capped by imperfect vision. In other words, if a minimum visibility is selected for normal eyes, then to provide the same degree of visibility for subnormal eyes the illumination should be increased in accordance with the recommendations of an eye specialist or the indications of the visibility meter.

Studies conducted with a visibility meter in the classroom indicate that one of the most difficult visual tasks encountered therein is the interpretation of the average chalk marks on blackboards. While some pupils have the benefit of clean boards with well formed characters, the majority of blackboards should be called "gray boards." This condition, combined with the average handwriting, results in low legibility.

While relatively high values of illumination are indicated by the meter, when the problems involved in lighting vertical surfaces are taken

Figs. 2 and 3—Effect of brightness upon three factors of seeing, and visibility meter (right).

into consideration, a compromise value is generally adopted. As a result the recommendation for blackboards today is for not less than 20 foot candles average in service, measured vertically.

To obtain the illumination recommended, the use of supplementary lighting units is practically imperative. This is because the illumination received on the vertical plane from a general lighting system is only from one-half to one-quarter as much as is received on the horizontal plane, depending upon the type of general lighting. For boards opposite windows, natural lighting may be of more benefit than on end boards, un-

Check-items in wise school planning
Better Lighting safeguards young eyes
Public Address broadens the scope of education
The Audiphone for hard of hearing pupils
The Inter-Phone saves time and footsteps
Bells and Buzzers must be dependable
Ventilating Fans provide better air, better study
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less some reflected glare is present.

One of the most successful ways of lighting blackboards to date has been by means of lens-type units, which can be either flush-mounted or mounted on the ceiling to provide an even illumination over the blackboard surface (Fig. 4). Figure 5 shows a parabolic-cylindrical type of unit, which also is utilized for lighting blackboards.

One of the rooms best adapted to supplementary lighting is the lecture room. The lecturer, in order to hold the interest and involuntary attention of the class, must put on a good, sincere educational "act." Whether it is pure declamation or involves the use of experiments to be most effective, it should be supported by pertinent properties and unobstrusive lighting effects. Figure 6 shows types of lighting that can be used to advantage in the lecture room.

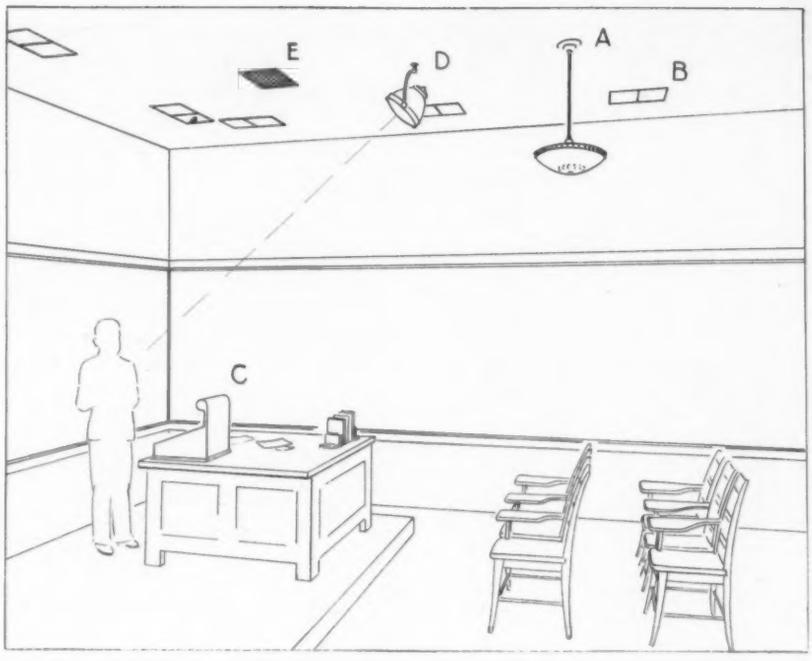

Fig. 6 — Lecture room showing advantageous types of lighting.

A in Figure 6 indicates an indirect lighting system to provide illumination of not less than 10 foot candles if the room is to be used solely for lecturing, or at least 20 foot candles if it is to be used for study and lecture purposes. In the average classroom (20 feet by 30 feet) these requirements can be met approximately by the use of six 300-watt and six 500-watt lamps, respectively. It is quite possible that the use of 200-300-500 watt three-light lamps could be justified readily in order to provide different values of illumination for different conditions.

B in Figure 6 indicates blackboard lighting units. These units definitely should be arranged to illuminate maps and other vertical surfaces upon which the lecturer expects the pupil to focus attention.

C in Figure 6 is a drawing of a well shielded lamp to illuminate any notes that the instructor might wish to use. The light must be excluded from the eyes of the pupils. While this type of lighting is useful at all times, it is most valuable for slides.

One important way for a speaker to hold the attention of a group is to be better lighted than his background. Unit D in Figure 6 is an industrial spotlight well louvered to prevent glare, which can be used for this purpose. The use of the speaker's spot is beneficial during the presentation at all times, but is, of course, of most value when the room lights are turned off.

Unit E in Figure 6 represents a downlight consisting of well louvered parabolic reflectors or a lens-plate system with the light emitted by it confined more or less to the top of the desk upon which demonstration equipment is placed. This provides higher illuminations on the experiment, making it easier for the pupils to concentrate on the demonstration in progress.

It is said that 87 per cent of our impressions come through our eyes. The educator's job is to impart impressions. Better lighting, and so better seeing, will do a better job.

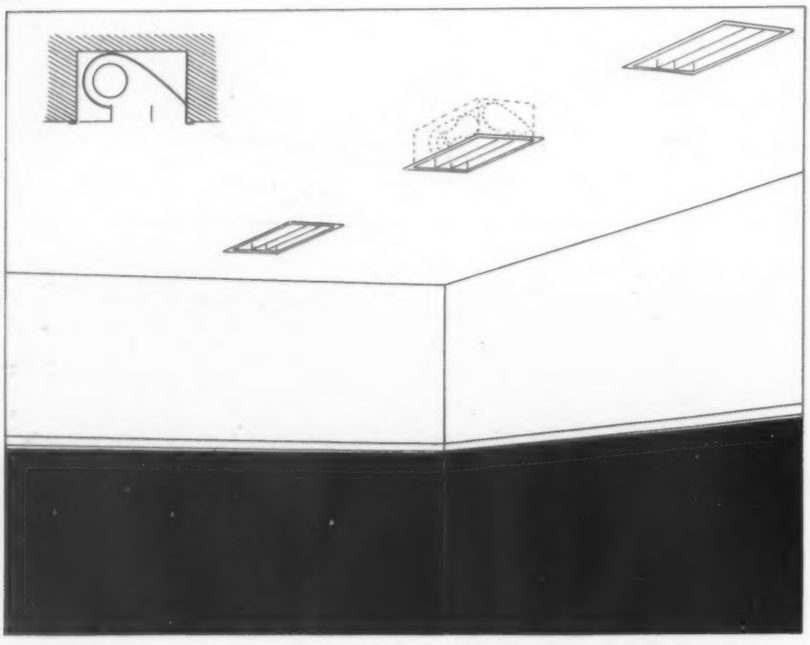

Fig. 5 — A parabolic-cylindrical metal reflector useful for blackboard and bulletin board lighting. These units are mounted on the ceiling and are designed to be equipped with 200-watt lamps.

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In Case of Fire

But there shouldn't be any fire. There wouldn't be, either, or as many, at least, if proper precautions were taken. Too often their origin remains a mystery, but the only mystery is why there are not more of them. Just look at that bunch of oily rags lying there in the corner of the basement. What about those mops stuck in an old wooden barrel?

Fortunately it's not all as bad as pictured. This we learn as we travel about, into the front door of this school, out the back door of that. Adherence to the strictest rules is required, however, and constant inspection of every nook and cranny is essential if all danger is to be eliminated.

Fireproof Lockers Help

Surprising the information that can be picked up when the school doors are closed. The hot days of August, for example, proved an excellent time to check on fire hazards, everyone warming up to the subject enthusiastically.

In Wheaton, Ill., where at Wheaton College, James N. McKellin presides over the buildings and grounds, oil mops and oily rags are at all times regarded with suspicion. In fact, to use this gentleman's own words, "they constitute a very important issue in the program of building maintenance."

For this reason janitor's mops sprayed with oil are kept in wirefront lockers to ensure circulation of air, and these lockers are located in a fireproof basement. Oily rags used in the paint shop, tool room, heating plant and such places are kept in standard self-closing, metal waste cans approved by the underwriters.

Rules and Regulations

In the opening paragraph we referred to the need for adhering to rules, and strict rules at that. Some good ones were discovered in Cedar Rapids, Iowa, which are applicable to every school system, large or small. Let's read them over together.

Listen to this. "Custodians shall take every precaution to guard against the danger of fire. No coal oil lamps or lanterns may be allowed in any building except upon absolute necessity, and then only after written permission has been obtained from the chief engineer.

"Neither candles nor fire of any kind or description may be used at any school entertainment held in public school buildings. If fire effects are desired they must be secured by the use of electric lights.

"Before leaving the buildings at night, custodians must pull out the main service switches supplying electric current to the respective buildings, taking care to see that the switches are open wide to prevent arcing. This makes fire from defective wiring impossible.

"All rubbish and rags must be burned as they collect; never left overnight in or around the building. Floor and other oils, paints and varnishes stored in the building must be kept in closed cans that do not leak; and rags, paper, waste and other articles of like nature must not be allowed to collect near where oils and varnishes are stored. Whenever possible, all such oils, paints and varnishes shall be stored in basement rooms having either concrete or earth floors. Mops and brushes used in oil must be stored in pails of water or in metal receptacles designed for such purposes.

"When no proper ash storage is provided so that ashes are required to be stored outside the buildings in open piles, such piles must be at least 50 feet from the building and from wood piles. Especial care must be taken to see that all live coals are extinguished.

"Drinking and smoking are prohibited in or around school buildings and grounds. Any deviation from this rule or any carelessness resulting in fire will be considered sufficient cause for instant dismissal.

"The buildings and premises must be kept clean and neat. The basements must be kept in a clean and sanitary condition and the yards free from weeds and filth. Rubbish must not be allowed to accumulate anywhere."

To these regulations might be added one more. Permit only experienced persons to install or repair electrical fittings and appliances. There are definite rules for wiring which, if known and observed, will prevent electrical fires.

Prefers Old Brooms

F. L. Peterson, custodian of the Filer Rural High School, in Filer, Ida., instead of oil rags or mops prefers an old push broom that may be easily cleaned each night and thrown away when the work is finished. "The safest way to use rags and mops," he finds, "is not to use them at all. Then it isn't necessary to lie awake nights wondering if they were cleaned or burned." If they are used he advocates putting them in the furnace, where they belong, each night or cleaning them thoroughly and hanging them out to dry.

That School Lawn

Too bad that with everyone waxing hot over fire protection we must change the subject. It's the time of year, nevertheless, to think about the school lawn. This raises the old controversy, should a lawn be seeded in the fall or in the spring? Well, every man to his own opinion. There is plenty of evidence available that fall seedings show a heavier turf, a healthier color and fewer weeds. Spring planting to be successful must be done early to permit a good growth before the sun gets too hot.

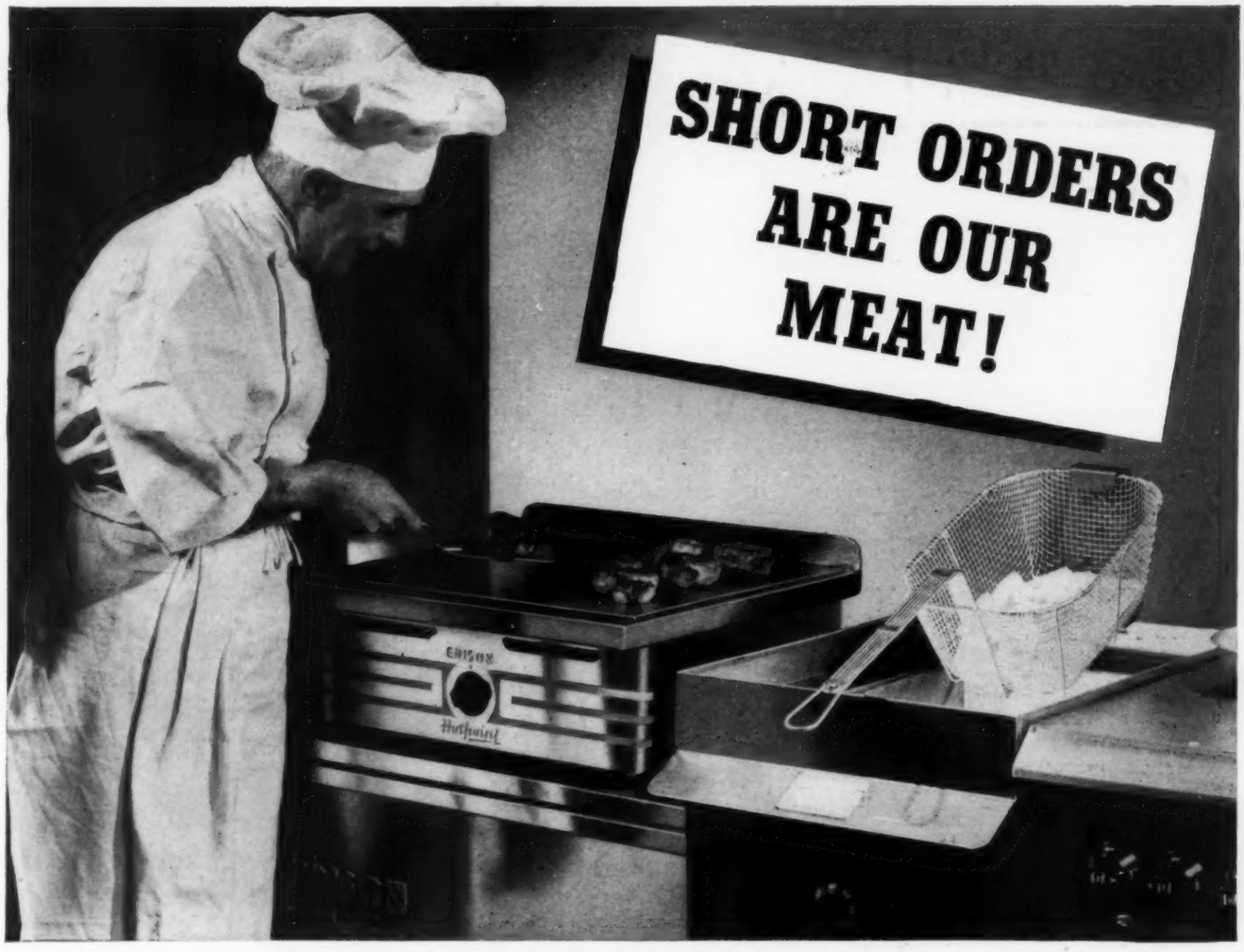
Whether it be merely a patch that must be seeded or a substantial area, it pays to do it right. Here are some general suggestions made by a well-known nurseryman.

First, a smooth, even and finely pulverized surface should be provided by leveling the areas to be seeded and raking them carefully. The seed is then broadcast on the surface at the proper rate. It is a good idea to apply one-half by walking across the lawn one way, distributing the seed either by hand or with a mechanical seeder. The other half of the seed is then similarly applied by working across the lawn at right angles to the first course that was taken. Next the seed is pressed into the soil and the soil made firm by rolling. In small areas it is sufficient to pat the dirt with the back of a spade. Finally the lawn should be sprinkled with a fine mist spray, and kept moist through continued sprinkling in the event that it starts to dry out.

First Aid to Lawns

Perhaps the lawn merely shows signs of wear or appears to be suffering from malnutrition. From the same source comes the following prescription:

Apply generous doses of rich, black dirt, fertilizer and seed. Peat or finely pulverized manure is equally efficacious. Make a light scattering of soil with the fine manure or peat added over the lawn. Next apply the fertilizer. Then the entire surface should be thoroughly raked, leveling the soil and mixing the fertilizer with it. Then the seed is scattered as already described, applied a little less generously, however, to those spots in which there is a thin covering of grass.



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NEWS IN REVIEW • • • •

President's Disapproval

President Roosevelt with much reluctance affixed his signature to the 1938 appropriation bill for the Department of the Interior, his chief objection being the nearly fourteen and one-half million dollars for development of vocational education — ten million dollars more than the estimate which he had presented to Congress.

"I recognize that a sound program of vocational education is greatly needed in the United States," the President said, "but an appropriation at this time of the full amount authorized under the Act of June 8, 1936, known as the George-Deen Act, is not the best way to meet this need.

"On September 19, I appointed an advisory committee to study the experience under the existing program of federal aid for vocational education, the relation of such training to other forms of education, and to prevailing economic and social conditions, and the extent of the need for an expanded program. At that time I called the attention of the committee specifically to the George-Deen Act, and requested the committee to study and report on the present need for an enlarged program as provided for in that act.

No Trained Personnel

"The committee points out that the teacher personnel is not now available in most states to staff enlarged programs of vocational education unless certification standards are materially reduced and teachers are employed who are not well qualified. In many instances, vocational education is already suffering from poorly-equipped teachers, and it would be a grave mistake to dilute the standards of teaching still further.

"The committee has pointed out that the basis for the distribution of funds among the states as provided for in the vocational education statutes, including the George-Deen Act, tends in many cases to increase rather than to decrease inequalities in educational opportunity. The areas most in need of aid are frequently the ones least able to meet the matching and other qualifying provisions.

"Federal funds spent for the promotion of vocational education under the Smith-Hughes and related statutes are by no means the only federal appropriations to provide vocational training for the youth of the nation. The CCC, WPA and NYA are concerned with vocational training. The educational programs for these and other federal agencies, old and new, are now being studied.

"It would be premature to launch a greatly expanded program in certain fields of vocational education before the report and recommendations of the committee studying these problems are available for consideration. It is, in fact, of the utmost importance that action should await the committee's findings, for at the present time the necessary statistical studies for planning economically sound programs of vocational education do not exist.

"Much of the apparent demand for the immediate extension of the vocational education program under the George-Deen Act appears to have been stimulated by an active lobby of vocational teachers, supervisors and administrative officers in the field of vocational education, who are interested in the emoluments paid in part from federal funds.

"It is not without significance that in the course of the debates on this appropriation, members of both houses of the Congress referred to the pressure exerted upon them by groups actively lobbying in behalf of the full appropriation. Evidence was read into the records of the debates in both houses indicating that much of the impetus behind this movement emanated from a single, interested source.

"A considerable number of educators interested in general education, many representatives of organized labor and a large group of employers are profoundly dissatisfied with the results of vocational education under the existing set-up, and have repeatedly urged that there be no further expansion of vocational education pending the report of the committee on the whole federal program of participation in education.

Would Defer Action

"The Advisory Committee on Education reports that it is unanimous in the recommendation that financial support by the federal government for the types of vocational education now receiving support should be continued without curtailment during the coming fiscal year. It is not in favor of the enlargement of federal support of vocational education until consideration has been given to the whole subject of federal relations to state and local conduct of education of all types.

"In view of the above, it is clear that I would be subject to censure if any of the $14,483,000 appropriated in this act for vocational training were spent inefficiently or inadvisedly. The Congress having appropriated the money to the extent of $10,000,000 more than was recommended, I will, therefore, carry out what is obviously the intention of the Congress — that as much of the total sum shall be expended during the current fiscal year as can properly and usefully be spent."

MEETINGS

N. A. P. S. B. O.

When the National Association of Public School Business Officials gathers in Baltimore October 11 to 15 for its annual convention, delegates will have a full day's program before formal sessions begin. October 11 has been designated as Baltimore Day, and visitors will have time to visit the city.

Association members will be welcomed at the opening session on October 12 by Mayor Howard W. Jackson and Forrest Bramble, president of the board of education. The association then will dispense with preliminary business, with its president, John S. Mount, inspector of accounts, State Department of Education, New Jersey, presiding, and will launch into its first informative session on accounting.

Among the speakers will be H. F. Alves, U. S. Office of Education; Gustave A. Moe, chief of field staff, Study Cost of Education, Albany, N. Y.; Dr. David E. Weglein, superintendent of schools, Baltimore, and the discussion leader, Fred Reagle of Montclair, N. J.

Charles J. Anderson of Trenton, N. J., will lead the discussion on new construction, and John Howatt of Chicago, the discussion on air conditioning at the afternoon session.

Speakers on the subject of new construction will be W. K. Harrison of W. K. Harrison and J. A. Fouilhoux, associated architects, New York City, and Dr. N. L. Engelhardt, Columbia University, New York City. J. L. Carlisle of St. Louis will discuss "Air Conditioning the Modern School," following which there will be a debate on ventilation arranged by Oscar Vogelsbach of Vogelsbach and Associates, Inc., engineers, of Newark, N. J.

At the finance session on October 13 the speakers will be Dr. John Guy Fowlkes, University of Wisconsin; Dr. Sidney Hall, state superintendent of public instruction, Virginia; Prof. William J. Schultz, College of the City of New York, and Dr. George D. Strayer, Teachers College, Columbia University.

Other prominent speakers at the con-

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In his Hobby Shop at Princeton, N. J., where he carries on a fascinating avocation begun in boyhood, W. W. Colpitts finds new comfort. Expertly fashioning chandeliers, lamps, candlesticks, wall sconces, stair rails, weather vanes, panelled figures and other ornamental work wrought out of iron and other metals, requires many hours of standing and foot strain. So, an attractive Sloane-Blabon Linoleum Floor now graces this unique little shop. Mr. Colpitts is a consulting engineer of note. He prides himself on his ability as a draftsman and makes all his own designs for work in his shop.

This amateur metal craftsman states that since covering the concrete floor with Sloane-Blabon Linoleum, he finds foot strain tremendously relieved and that the linoleum surface meets every requirement from a durability viewpoint. The latter is important since the Hobby Shop is equipped with forge, lathe, drill press, grinder, saw, gas-cutting-and-welding equipment and other heavy tools. Embellishing the brown Marbletone pattern is an inset figure of a metal craftsman in black linoleum with white suspenders and belt; a black and yellow border surrounds the field of the floor. For many types of school and college floors this Sloane-Blabon Linoleum installation contains a modern hint.

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vention include Belmont Farley, National Education Association; Dr. Sherman G. Crayton, New York State Inquiry, Albany; James G. Robinson, executive director of the New Jersey Unemployment Commission; Dr. Charles H. Elliott, commissioner of education, New Jersey; Lloyd M. Theurer, business manager, Logan, Utah; R. P. Orchard, clerk-treasurer, Bedford, Ohio; Prof. Phyllis Sprague, State College, Pa.; Dr. Mary deGarmo Bryan, Columbia University; Dr. A. S. McAllister, Bureau of Standards, Washington, D. C., and Henry A. Gardner, director, Institute of Paint and Varnish Research, Washington, D. C.

Cafeteria Convention

School lunchroom directors who have been attending allied food conventions to gain information relative to their field will band together for the first annual convention of the National School Cafeteria Association at the Hotel Morrison in Chicago from November 11 to 12.

For almost a year now this organization has been in a formative stage. Last June the organization committee met in Louisville, Ky., and voted unanimously to launch a National School Cafeteria Association, naming F. O. Washam, director of Chicago school lunchrooms, as chairman. Heads of food service departments and all persons holding subordinate supervisory positions in public and private schools are eligible for membership in the association. Headquarters of the association will be maintained at 228 North La Salle Street, Chicago.

New equipment and foods will comprise the commercial exhibits at the convention. The program is not announced.

Colorado's Course for Custodians

School plant custodians from four Western states met recently at a five-day training school offered annually by the Colorado State College, for the thirteenth consecutive year. The states represented included Colorado, Wyoming, Oklahoma and Nebraska, Wyoming having the largest out-of-state attendance. J. Elmer Nelson, assistant business manager of the Denver public schools, was the official host to the gathering.

In addition to the short course, an auxiliary program on standards of school lighting was directed by R. G. Dempsey. This program included requirements for schoolroom lighting, visits to the college power plant and other college buildings.

Included on the program of the regular short course were an illustrated talk on custodian-engineering service by Mr. Nelson; an illustrated talk by Mr. Pinsky, associate professor of mechanical engineering, Fort Collins, Colo., on heating, ventilation and air-conditioning; an illustrated talk by Mr. Dempsey on maintenance of buildings; a demonstration talk by Thomas F. Balfe, plumber foreman of the Denver public schools, on operation of sanitary and efficient plumbing systems; demonstration talk by George Henderson, electrician of the Denver public schools, on electrical engineering; a course in painting, plastering and patching directed by Mr. Dempsey; a demonstration talk by Mr. Henderson on school building hardware; a lecture on custodian relationship to the community by Denver's superintendent of building and grounds, Mr. Soye, and a lecture by J. J. Ball, also of the Denver public schools, on state organization of school employees.

INSTRUCTION

Appraising Propaganda

Plans are under way to initiate this fall at the Lincoln and Horace Mann Schools at Teachers College, Columbia University, and at other selected schools throughout the country, units of study in the analysis of propaganda.

Preparation for intelligent citizenship in a democracy is the purpose of the units of study, which are to be correlated with courses in the social sciences or English or history or journalism. They grow out of three years' experimental work by graduate students in the Teachers College course in "Education and Public Opinion" offered by Prof. Clyde R. Miller.

During the last three years, approximately twenty members of Professor Miller's class have conducted experimental work with young people of junior and senior high school age in the detection of propaganda in newspapers, magazines, cinema and radio.

Working in English, social science, history, journalism and even mathematics, Professor Miller's students, in follow-up work based on the outline of his course, developed at the high school age level techniques to help pupils understand the nature of public opinion and of propaganda and the nature of their own minds.

The units of study consider such phases of this new approach to exploration of the individual and the world in which he lives as: why the individual and great strata of society hold certain beliefs, so-called convictions and prejudices; the urgency and responsibility for development of the analytical, critical faculty among citizens in a democracy, and evaluation of forces in present day society which dominate the thinking and actions of people.

In the process of analyzing propaganda pupils subject themselves to searching criticism; they analyze influences brought to bear upon them by environment, training, education and by the extent to which they are influenced by the propaganda of others.

Pioneer units in "realistic" analysis of propaganda, next fall's courses of study in which they will be used will follow Professor Miller's basic philosophy: "The best way to deal with propaganda whether it is our own or that of others, is to subject it to searching criticism and appraisal. Ask who holds the opinion, who utters the propaganda, and why.

"Good opinion," he adds, "can never be hurt by criticism."

Revise Oregon Courses

Revision of three courses of study for the elementary grades of the Oregon public school system under the direction of Oregon teachers recently has been announced.

Dr. Roy L. Skeen of the Oregon Normal School at LaGrande directed a committee of teachers which recently compiled a new language course for the elementary grades.

Alta Tanner, a primary teacher in the Astoria schools, directed the work of the group that revised the social studies curriculum for the primary grades. Florence Beardsley, director of the training school at the Oregon Normal School in Monmouth, performed the same functions for the upper elementary grades.

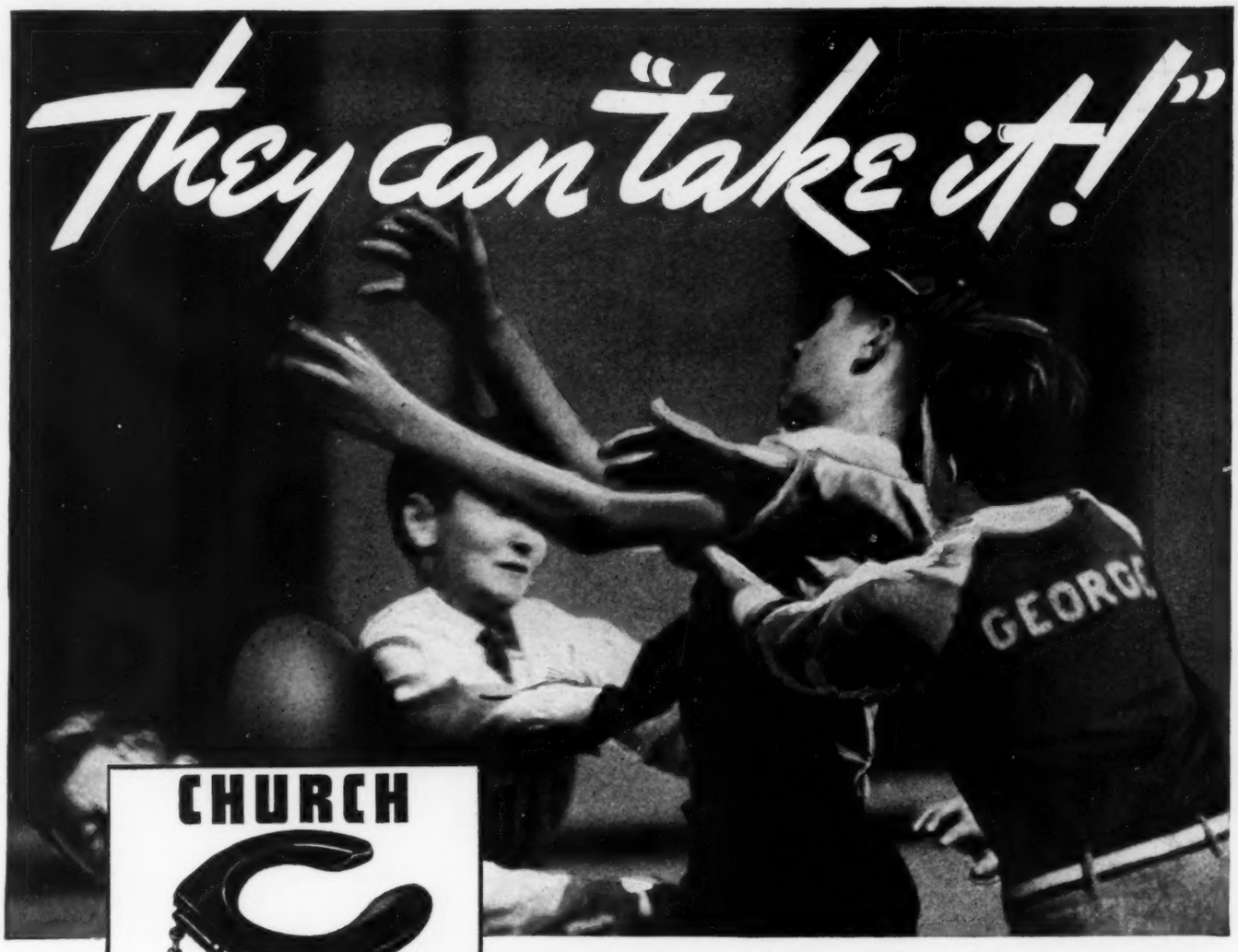
Safety Through WPA

New York City has given safety instruction to more than three and a third million school children in three years through an adult education project of the WPA, which furnished instructors.

In the school itself, it has been found that accidents occur most frequently in gymnasiums, and next in order of frequency, on stairs and in corridors, and finally in vocational shops and in classrooms. On the streets the most frequent accidents are caused by stealing rides, playing in the streets and running off sidewalks, usually in pursuit of balls. Accidents and fatalities to roller skaters vary with the weather.

Recommends City College

Establishment of a free city college in St. Louis to offer formal instruction for high school graduates and less formal for those who are not high school graduates but who are eager and qualified to obtain college instruction, has been recommended to the board of education by Dr. Henry J. Gerling, superintendent of schools. Doctor Gerling's recommendation was largely based on achievements of the two WPA colleges in St. Louis, one for white and the other for colored students, in which more than 1,000 students were enrolled for courses during a three-year period.



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PERSONNEL

Curriculum Laboratory

At Kansas State Teachers College, Emporia, a curriculum laboratory is in the process of development in a large room in the elementary school building. The best materials on curriculum development will be collected from various parts of the country and placed in this room for the use of classes. Those of most significance relate to the current social scene, including community relations, state relations, national relations and international relations. Each of the major classifications will be divided under the headings of language, citizenship, health, vocations and leisure-time interests and activities.

Testing for Tuberculosis

Tuberculin tests were given to all employees of the board of education, Lexington, Ky. Teachers, principals, janitors, cafeteria workers and all other employees who reacted positively were x-rayed. No active cases of tuberculosis were found, but several teachers were directed to report for further examination in six months as a precautionary measure. No infected employees will be retained in the school system.

FINANCE

Big Money

A record sum of $159,243,957 has been voted by the New York City board of education to carry on school activities in 1938. The board also approved a budget of $84,405,308 for the first six months of 1939.

The highest budget of the board of education hitherto was in 1932, when it was about $145,000,000. The 1938 budget represents an increase of $14,584,658 over the 1937 budget, and restores many services that have been curtailed or abandoned in the last five years as a matter of economy.

The proposed budget calls for approximately 1,250 additional teaching positions to reduce the average size of classes from 31.5 to 30.5 in the senior high schools, and from 36 to 35 in the junior high schools.

Elementary and junior high school substitutes will have their pay increased from $6 to $7 a day, while those in the high schools will get $8.50 instead of $7.50 a day.

Aid for Downstate Illinois

Illinois will appropriate money for distressed downstate high school districts for the first time in its history under the Parker-Davis Act allocating $300,000 of state funds to about twenty high school districts which claimed they could not open this fall without aid.

Missouri's $30 Student Fee

Reductions in required fees to the University of Missouri beginning with the fall semester have been made in the amount of approximately 31 per cent by the board of curators. The library, hospital and incidental fee for a full program will be $30 a semester except for students enrolled in the schools of law and medicine. This is in line with a policy declared by the board of curators three years ago that student fees would be reduced just as soon as the state appropriations to the university would permit.

For students taking a full program of work the university also will continue to provide free medical attention, hospital care and other health services. In addition, the university will provide students free admission to the university concert series featuring nationally known artists because of the educational and cultural advantages.

Students who are nonresidents of Missouri will not share in the reduction of fees.

Develop Music Culture

To explore community musical culture, a $10,000 grant has been made to the University of Kentucky for the coming year by the Carnegie Corporation. The project aims to develop music as a form of community culture in the rural and urban regions of Kentucky, through agencies set up in the state university. The board of trustees of the university has appointed Dr. William Van de Wall of the faculty of Columbia University and director of the committee for the study of music in institutions, as professor of musical education and head of this study project.

Below Civil Service

The average salaries paid for all U. S. Civil Service classifications is $339 a year greater than the average salary of a Cincinnati school teacher, according to a report recently submitted by a committee of the Federated Council of Cincinnati Teachers Organizations.

County Junior College

Establishment of a permanent, self-sustaining county junior college in Yonkers, N. Y., will be undertaken by a fund-raising committee representing numerous interests in the city.

Frank E. Cooley, Jr., director of the Yonkers Collegiate Center, which closed on July 23 after WPA funds were withdrawn from twenty similar projects throughout the state, announced plans for the drive, which must raise $50,000.

Officials of a university in New York City have agreed to assume full supervision of the college once it is established, according to the directors.

A moderate tuition will be charged students in contrast with the free instruction of the former Collegiate Center. Full college credit will be granted in all work and students who complete the two-year course will be eligible for transfer as third-year students to all colleges and universities which accept the New York City institution's standards.

ANNIVERSARIES

Centennial Commemoration

Leading educators of the country through the three-day conference of the Progressive Education Association, meeting October 28, 29 and 30 in Chicago, will commemorate the one-hundredth anniversary of the birth of Col. Francis W. Parker.

The Francis W. Parker School, founded by Colonel Parker, and the Chicago Association of Child Study and Parent Education are cooperating in arranging the conference program honoring the man who has been conceded the title of "Father of Progressive Education."

President Robert M. Hutchins of the University of Chicago, whose school of education Colonel Parker organized, and Flora J. Cooke, who was principal of Francis W. Parker School during Colonel Parker's regime, will be speakers, and among others will be William H. Kilpatrick, Carson Ryan, Chares E. Merriam and T. V. Smith.

NAMES IN NEWS

City Superintendents

DEWITT S. MORGAN, principal of Arsenal Technical High School, Indianapolis, for seven years and a member of its faculty for twenty years, will assume the superintendency of the Indianapolis public schools September 1. The appointment of Mr. Morgan fills the vacancy caused by the death of PAUL C. STETSON.

BRYAN DICKSON, deputy state superintendent, District No. 12, Texas, has been elected superintendent of schools at Marshall, Tex.

DENNIS E. CALLAHAN recently assumed the post of superintendent of public schools at Lawrence, Mass., succeeding BERNARD M. SHERIDAN, who retired as superintendent after thirty-three years of service as head of that school system.

EARL H. HANSON, principal of the high school at Rock Island, Ill., will

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MAKERS OF SCHOOL SUPPLIES FOR OVER 100 YEARS

$463 or $316 Per Pupil Cost

Here is a specific example of the economies possible in the construction of a $300,000 Junior High School project by using a convertible type of furniture on a main floor of an auditorium and in one or two other rooms and by providing for the dual use of space. Five architects were requested to submit plans in competition for this "Deskor Way" of building. The plans were judged anonymously and those selected disclosed some very interesting facts.

A building could be built "The Deskor Way" to accommodate 950 pupils and have an auditorium with 950 seats for exactly the same cost as the building originally planned to accommodate only 830 pupils with no auditorium. As it would have its own auditorium, it could be built in a more strategic location in another part of the town.

The analysis of the plan submitted is as follows:

"The Old Way" 820,230 ft. cubage (no auditorium)			"The Deskor Way" 835,000 ft. cubage (with auditorium seating 950)		
		Home Stations			
660	(20)	Class Rooms	(14)	490	
70	(2)	General Science	(2)	70	
.....	(1)	Drawing Room	(1)	35	
.....	(1)	Music Room	(1)	40	
.....	(No)	Auditorium	(1)	315	
730		Total Home Stations		950	
		Pupil Locations			
650	(20)	Class Rooms	(14)	490	
70	(2)	General Science	(2)	70	
35	(1)	Drawing Room	(1)	35	
80	(1)	Music Room	(1)	81	
25	(1)	Manual Training	(1)	25	
36	(1)	Sewing	(1)	36	
36	(1)	Cooking	(1)	36	
90	(1)	Gymnasium	(1)	90	
1032		Total Pupil Locations		863	
81.7%		Maximum Efficiency		81.7%	
843		Auditorium Study Seats at Desks		705	705
0		(also available for recitation)		315	
0		Maximum Efficiency		81.7%	
				257	257
843		Total Pupil Locations (Maximum Efficiency)			962

In "The Old Way" (Maximum Efficiency) there are many more pupil locations (843) than there are home stations (730). In order to accommodate more than 730 pupils it would be necessary to add more home rooms with "screwed-down" seats, but such action would also increase the number of pupil locations which would continue the disproportion.

In "The Deskor Way" (Maximum Efficiency) there is the correct number of pupil locations (705) for a 700 pupil school. This reduction is made possible because in addition there are available in the auditorium 257 study seats (maximum efficiency) making a total of 962. This is almost identical with the home stations (950).

The comparative plans demonstrate that if a building should be built "The Old Way" to accommodate 950 home stations, which "The Deskor Way" produced, it would cost $90,000 more, and if an auditorium should be added there would be an additional $50,000 required, which would make the cost per pupil $463 as against $316 for "The Deskor Way."

Result—a building built "The Deskor Way" would save $140,000 which is nearly one-third of the cost! (This comparison is for such building to have an auditorium and 950 home stations).

Complete details on this project sent on request, or better still, let us estimate the saving you can make by building "The Deskor Way" on your school project.

DESKOR CHAIR SALES CORPORATION
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succeed SELMER H. BERG as superintendent of Rock Island schools. OWEN B. WRIGHT, principal of Rock Island's Washington Junior High School, will succeed Mr. Hanson as high school principal. MARVIN C. BERGWALL, instructor in the Washington Junior High School has been named to succeed Mr. Wright.

L. H. RHODES, former superintendent of schools, Dalhart, Tex., has been elected superintendent at Tucumcari, N. M.

ALBERT T. PATTY, principal of the high school in the town of Franklin, Mass., has been appointed to the office of superintendent of schools for both South Hadley and Granby, Mass. Mr. Patty will succeed RICHARD TUCKER, who has been superintendent in both towns for the last six years.

FRANK BENNETT, superintendent of public schools at Tillamook, Ore., has been elected city superintendent of schools at Albany, Ore., to succeed REX PUTNAM, who has been appointed state superintendent of public instruction. WARD HAMMERSLEY, principal of the senior high school at Tillamook, becomes superintendent there.

B. W. DUNN, for four years superintendent of schools at Woodburn, Ore., has been elected superintendent of schools at Coquille, Ore.

J. FRED ESSIG is the new superintendent of schools at Grand Junction, a rapidly growing city of Western Colorado, having 105 teachers in its school system.

DALLAS PORTER, principal of the centralized schools at Woodville, Ohio, for the last six years, was elected to succeed GLENN W. ZELLER as superintendent. Mr. Zeller resigned the superintendency to accept a post in the schools at Breman, Ohio.

J. O. ALLEN, for twelve years principal of the Albany High School, Albany, Ga., was elected superintendent of the Albany schools, succeeding the late ROLAND E. BROOKS.

C. G. KECK, principal of the high school at Shelby, Ohio, has been elected to the superintendency of that school to succeed R. I. LEWIS, who recently resigned.

ROBERT FARNSWORTH, principal of the schools at Okanogan, Wash., has been advanced to the position of superintendent, succeeding HOMER M. DAVIS.

A. L. FERGUSON, principal of the Herbert Hoover High School, Glendale, Calif., since 1913, has been appointed deputy superintendent of schools of the Glendale unified school district. He succeeds DR. NORMAN R. WHYTOCK, who was made superintendent of schools for Los Angeles County.

HERBERT E. REISGEN, supervising principal of schools at Downingtown, Pa., has been elected superintendent of the schools at DuBois, Pa. He succeeds R. W. ROBINSON, who resigned to take a position with the state department of public instruction.

ARTHUR E. BURKE, principal at Turner Falls High School, Montague, Mass., since 1926, has been elected superintendent of the schools of Montague. He succeeds JOSEPH KEATING, who recently resigned to become superintendent at Arlington, Mass. GEORGE F. WRIGHTSON succeeds Mr. Burke as principal.

A. D. GRAY is the new superintendent of schools for the towns of Waldoboro, Nobleboro, Jefferson and Bremen, Me. He comes to the Waldoboro union from the principalship of the high school at Mexico, Me.

STEWART B. ATKINSON has submitted his resignation as principal of Dartmouth High School, Dartmouth, Mass., a position he has held since 1930, to become principal of the high school at Hingham, Mass.

DR. WALTON D. HINDS, for four years a member of the high school faculty at Galena Park, Tex., has been chosen superintendent of Galena Park schools.

EDWARD L. SCHMIDT, superintendent of the Meadowlands schools, Meadowlands, Minn., for eleven years, has been elected to head the schools at New Prague, Minn.

E. CARLTON ABBOTT, member of the faculty of the high school at Princeton, N. J., for a number of years was elected principal of the high school at Lansdowne, Pa.

KENNETH E. SMITH, for eleven years supervising principal of the public schools at Warwick, N. Y., has been elected superintendent of schools at Walden, N. Y., to succeed DR. E. R. VAN KLEECK. Doctor Van Kleeck resigned to accept the city superintendency at Norwich, N. Y., succeeding FRANK R. WASSUNG, who goes to Garden City, N. Y.

WILLIAM F. THOMAS, formerly superintendent of Stephenson Township

Coming Meetings

Sept. 26-28—New York Council of School Superintendents, Saranac Inn, New York.

Oct. 1-2—Secondary Study Conferences, Progressive Education Association, New York City.

Oct. 7-8—Michigan Educational Association: Region 5, Alpena; Region 7, Sault Ste. Marie.

Oct. 7-9—Vermont State Teachers' Association, Rutland.

Oct. 11-15—National Association of Public School Business Officials, Baltimore.

Oct. 14-15—Michigan Education Association: Region 2, Flint; Region 3, Jackson.

Oct. 14-15—Minnesota Education Association: Northeast Division, Hibbing.

Oct. 15-16—Regional Conference, Progressive Education Association, Los Angeles.

Oct. 18-29—Washington Education Association; Wenatchee and Yakima, Oct. 18-19; Spokane and Walla Walla, Oct. 21-22; Bellingham and Tacoma-Seattle, Oct. 25-26; Aberdeen and Vancouver, Oct. 28-29.

Oct. 20-23—National Council on Schoolhouse Construction, Columbus, Ohio.

Oct. 21-22—Indiana State Teachers' Association, Indianapolis.

Oct. 21-22—Michigan Education Association: Region 6, Detroit; Region 8, Battle Creek.

Oct. 21-22—Minnesota Education Association: Central Division, St. Cloud; Northern Division, Bemidji; Southeast Division, Winona; Southwest Division, Mankato; Western Division, Moorhead.

Oct. 21-23—Utah Education Association, Salt Lake City.

Oct. 25-28—National League to Promote School Attendance, Chicago.

Oct. 27-29—North Dakota Education Association, Minot.

Oct. 27-30—Nebraska State Teachers' Association: District 1, Lincoln; District 2, Omaha; District 3, Norfolk; District 4, Grand Island; District 5, Holdrege, and District 6, Scottsbluff.

Oct. 28-29—Maine Teachers' Association, Portland.

Oct. 28-29—Michigan Education Association: Region 4, Grand Rapids.

Oct. 28-30—Michigan Education Association: Region 1, Detroit.

Oct. 28-30—Regional Conference, Progressive Education Association, Chicago.

Oct. 28-30—Rhode Island Institute of Instruction, Providence.

Oct. 28-30—Wyoming Education Association, Thermopolis.

Oct. 28-30—Colorado Education Association, simultaneous meetings at Denver, Grand Junction and Pueblo.

Oct. 28-30—Montana Education Association: Western District, Kalispell; Southwestern District, Butte; Eastern District, Miles City; North Central District, Great Falls.

Oct. 29—Connecticut State Teachers Association, simultaneous meetings at Hartford, Bridgeport and New Haven.

Nov. 4-5—Arkansas Education Association.

Nov. 4-6—West Virginia Education Association, Clarksburg.

Nov. 4-6—Iowa State Teachers Association, Des Moines.

Nov. 5-6—Food Service Directors Conference, Boston.

Nov. 5-6—Kansas State Teachers Association, simultaneous meetings at Lawrence, Manhattan, Dodge City, Hays, Parsons and Wichita.

Nov. 11-12—National School Cafeteria Association, Chicago.

Nov. 12-13—Regional Conference, Progressive Education Association, Ann Arbor.

Nov. 12-13—Arizona Education Association, Tucson.

Nov. 12-15—New Jersey State Teachers' Association, Atlantic City.

Nov. 14-17—Association of Land Grant Colleges and Universities, Willard Hotel, Washington, D. C.

Nov. 17-20—Missouri State Teachers Association, St. Louis.

Nov. 18-19—Delaware State Education Association, Wilmington.

Nov. 19-20—Louisiana Teachers Association, Shreveport.

Nov. 19-20—Regional Conference, Progressive Education Association, Philadelphia.

Nov. 21-24—South Dakota Education Association, Sioux Falls.

Nov. 22-23—New York State Education Association, house of delegates, Jamestown.

November (Thanksgiving Week)—Virginia Education Association, Richmond.

Nov. 25-27—Texas State Teachers Association, Houston.

Nov. 26-27—Idaho Education Association.

Dec. 2—Regional Conference, Progressive Education Association, Springfield, Mo.

Dec. 3-4—Regional Conference, Progressive Education Association, Tulsa.

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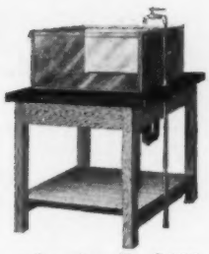

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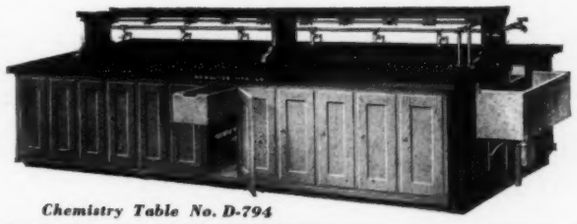

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Schools, Stephenson, Mich., has been appointed principal of the Adams School, Birmingham, Mich., to succeed F. MORSE COOKE, who resigned to become high school principal at East Lansing.

IVAN TRAVIS, superintendent of the grade school at Kirkland, Wash., has been selected superintendent of schools at Redmond, Wash.

AARON W. CRAVENS, member of the faculty for the last seven years, has been named superintendent of the high school at Shannon, Ill.

LEO H. DOMINICK has taken over his new duties as superintendent of schools at Fergus Falls, Minn.

County Superintendents

GEORGE J. OLIVER, former division superintendent of Northampton County, Virginia, has assumed the division superintendency over Henrico County of that state.

A. I. WINTHER has succeeded SANFORD V. WILSON as superintendent of schools of Oconto County, Wisconsin, for a four-year term.

FRANK E. DAY, who recently completed his second four-year term as superintendent of schools in Wells County, Indiana, has been appointed principal of the Jackson Consolidated School, Bluffton, Ind. He was succeeded as county superintendent by LLOYD LIERANCE.

J. D. LIVINGSTON recently took office as superintendent of education in Allendale County, South Carolina.

AMOS W. ZERBE has been appointed superintendent of Schuylkill County public schools, Pennsylvania, succeeding IRVIN A. SELTZER, retired.

R. CLAUDE GRAHAM, supervisor of instruction in Pittsylvania County, Virginia, last year, succeeds A. L. BENNETT as superintendent of public schools of Albemarle County, Virginia.

VIRGIL L. FLINN, principal of the high school at Charleston, W. Va., has been elected superintendent of Kanawha County schools, West Virginia.

State Departments

J. H. COOK, for a number of years superintendent of the Summerville public schools, Summerville, Ga., has been appointed state school supervisor for twenty counties in Northwest Georgia. Mr. Cook will serve as general superintendent of county and independent schools under the new seven months' school set-up in Georgia.

DR. ROBERT O. SMALL, director of the division of vocational training in the Massachusetts department of education, is a member of a special commission to investigate university extension, training and instruction for teachers of physically handicapped pupils.

W. D. NIXON, former superintendent of education for Spartanburg, S. C., has been elected state supervisor of high schools for the South Carolina department of education. He succeeds JOHN G. KELLY, who resigned to become registrar of Winthrop College.

DR. EUGENE B. ELLIOTT has been reelected superintendent of public instruction for the state of Michigan.

On the Air During September

The following programs of particular interest to school people are arranged by the National Broadcasting Company and the Columbia Broadcasting System. The time is Eastern Daylight Saving Time.

Daily

National Farm and Home Hour[1]—1:30-2:30 p.m. (NBC Blue).

Monday

Bernard Shaw Plays—9:30-10:30 p.m. (NBC Blue).

Tuesday

Science Service Series, dramatizing and explaining latest scientific developments—5:30-5:45 p.m. (CBS).

Drama of the Skies, Dorothy A. Bennett, assistant curator of the Haydn Planetarium, New York City—5:45-6:00 p.m. (CBS).

Wednesday

Current Questions Before the House, each week a different member of the House of Representatives discusses a current problem—3:30-3:45 p.m. (CBS).

Sept. 1—An Englishman's View of American Educational Experiments, Harold James Boyden, master of one of the large English private schools. Time not yet set.

U. S. Cabinet Series, presenting a different member of the President's cabinet each week—10:30-11:00 p.m. (CBS).

Sept. 1—Cordell Hull, secretary of state.

Sept. 8—Member of Treasury Department, Secretary Morgenthau being in Europe.

Sept. 15—Charles Edison, assistant secretary of navy.

Thursday

Current Questions Before the Senate, a member of the Senate is heard each week discussing a current problem—5:00-5:15 p.m. (CBS).

Friday

Education in the News, dramatization of important news items referring to the world of education by the U. S. Office of Education—6:00-6:15 p.m. (NBC Red).

Sept. 17—President Roosevelt in connection with 150th anniversary of the signing of the Constitution. Time not yet set.

Saturday

Robin Hood Dell Concerts, Jose Iturbi, conductor—8:30-9:30 p.m. (NBC Red).

Sunday

University of Chicago Round Table Discussions—12:30-1:00 p.m. (NBC Red).

The World Is Yours, thrilling adventures in the world of science by the Smithsonian Institution—4:30-5:00 p.m. (NBC Red).

Sept. 19—Radio Peace Conference, distinguished leaders in the world peace movement will be heard around the world in a special radio peace rally—4:00-5:00 p.m. (CBS).

[1]Except Sunday.

Principal Changes

DR. H. H. REIGHLEY has been named principal of West High School, Columbus, Ohio, succeeding OTTO H. MAGLEY. Doctor Reighley has been principal of West Junior High School since 1929.

N. E. BUSTER, who served as principal of Stripling High School, Fort Worth, Tex., last year, has been appointed principal of Fort Worth's new Arlington Heights High School.

DR. GEORGE MCINTIRE, former superintendent of the Oceanside-Carlsbad Union High School, Oceanside, Calif., has become principal of the high school at Chico, Calif.

FRANCIS LEONARD BACON, principal of the high school at Evanston, Ill., was given the doctorate of humane letters at the commencement of Williams College.

DR. W. H. YARBROUGH, principal of the Peabody Demonstration School since 1923, has been named principal of the new East End High School, Nashville, Tenn., which will open this fall.

EDITH E. PENCE, vice principal at George Washington High School, San Francisco, has been named to the new position of director of curriculum, and CHARLES A. SIMONDS, principal at Aptos Junior High School, has been named director of counsel and guidance.

MERRILL R. STEPHAN has been released from his contract as superintendent of schools at Stockton, Ill., enabling him to accept the principalship of the Elgin High School, Elgin, Ill., succeeding WILLIAM L. GOBLE, identified with the Elgin public school system for thirty-six years, who retired.

GEORGE A. MATTSON of Camden, N. J., has been elected principal of the Salem High School, Salem, N. J. Mr. Mattson has been research assistant to DR. LEON NEULEN, superintendent of the Camden city schools for the last four years.

EDGAR A. ANDERSON has been appointed principal of Samuel Gompers Trades School of San Francisco, which opened on August 16. He will continue as principal of Humboldt Evening School.

R. W. ISLEY has been named principal of the South Edgecombe High School, Pinetops, N. C., succeeding J. N. GRANT, resigned.

CHESTER M. DOWNING has been appointed principal of the high school at Fairhaven, Mass. For the last few years he has been in the Brookline High School, Newton, Mass.

FRANCES ALTER has been appointed to the principalship of the Oberlin High School, Oberlin, Ohio.

C. PHIL PETERS, principal of Washington Junior High School, Tampa, Fla., was appointed principal of H. B. Plant High School, Tampa, for next year.

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V. R. BELIEU of Gustine, Calif., was elected principal of the Denair Union High School, Denair, Calif., replacing V. G. BINSACCA, who resigned to accept a position at Williams, Calif.

E. JAY HIPPENSTEEL, principal of the schools at Walkerton, Ind., has been made principal of the Leesburg High School, Leesburg, Ind., succeeding CARL D. HARMON, who resigned.

R. TRENTON SHOEMAKER, principal of the high school at Salem, N. J., has been elected principal of the senior high school at Long Branch, N. J.

CHARLES E. TAYLOR, for the last ten years principal of the high school at Bangor, Me., will succeed ALBERT G. SNOW as principal of the high school at Biddeford, Me. Mr. Snow will attend the Harvard graduate school of education.

SAMUEL BEEBER has been promoted from the assistant principalship of South High School, Worcester, Mass., to principal, succeeding EDWARD M. WOODWARD, retired.

KENNETH C. COULTER of the high school faculty of Belleville, N. J., has been elected principal of the high school at Jamesburg, N. J.

In the Colleges

DR. HARRY WRIGHT MCPHERSON, president of Illinois Wesleyan University, has been elected executive secretary of the board of education of the Methodist Episcopal Church. Acceptance of the position will necessitate his resignation as president of the university.

R. E. L. SUTHERLAND, district supervisor of the WPA adult education program at Tupelo, Miss., has resigned to become president of Pearl River Junior College at Poplarville, Miss.

DR. A. L. STRAND is the new president of the Montana State College at Bozeman. For the last six years he has been head of the department of entomology at the college and state entomologist.

DEAN WILLIAM PICKENS, New York City, field secretary for the National Association for the Advancement of Colored People, has been named president and superintendent of Western University, succeeding BISHOP WILLIAM T. VERNON. The new head of the school is a graduate of Yale University and formerly was dean of Talladega and Morgan Colleges.

DR. PAUL G. CHANDLER, an instructor in the State Teachers College at Millersville, Pa., since 1927, has been chosen to succeed DR. G. C. L. RIEMER as president of the State Teachers College at Clarion, Pa.

GEORGE W. DIEMER, president of the Kansas City Teachers College, Kansas City, Mo., has been elected president of the Central Missouri State Teachers College, Warrensburg, succeeding DR. E. L. HENDRICKS, who has been named president emeritus. Under the leadership of Mr. Diemer the Kansas City school has become known for many innovations in teaching. Among them is the follow-up system whereby graduates of the school who begin teaching in Kansas City schools are under the supervision of the college the first year of their work as teachers.

DR. G. W. HILDRETH, principal of the senior high school at Fremont, Neb., for the last five years, has resigned to supervise the training school at the Chadron State Normal.

DR. FRED ENGELHARDT will be inaugurated as the ninth president of the University of New Hampshire on October 9.

DR. FRITHIOF C. BORGESON has been advanced to the chairmanship of the department of coordination of teacher training in the school of education, New York University.

GEORGE ANSELM has been appointed professor of educational practice and principal of the Curry training and demonstration school at North Carolina Woman's College. Mr. Anselm is a for-

Now Vacuum Cleaning Everywhere . . .

Now, even the smallest schools and the most remote points in the larger schools can have the advantages of a powerful vacuum and the Spencer Method of cleaning.

One man can go anywhere with the Spencer Portable, clean any surface from wood and cement to carpets and composition floors, and do better cleaning in less time.

Spencer Systems, in use in more than 1500 schools, have proven a thoroughness, long life and low cost of operation under all conditions.

Let our representative show you some Spencer Central Systems in your vicinity or demonstrate a Spencer Portable in your school.

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WHAT ARE THE SCHOOLS DOING TO OUR CHILDREN ?

● Developing alertness, energy, the spirit of confidence and achievement, active minds in vigorous bodies?

Or do school days bring lassitude, undue fatigue, restlessness and irritability? Do school years mean increasing habits of slump and slouch, waning interest in learning, narrowing shoulders, and strained, overtaxed eyesight?

Various school conditions affect such vitally important results—some of them intangible, difficult to identify or control—but

One tremendously important influence is easily identified, readily controlled. *Seating Equipment* contributes to wholesome posture habits, to physical vigor and energy, to conservation of eyesight—or it does irreparable injury. What are their School Desks doing to the children in your schools?

The American Universal Better-Sight Desk

"Posture Pal," the American Universal Better-Sight Desk, is a scientific contribution to pupil posture, health, energy and sight protection.

You will be interested in reading "Guardians of Eyes and Health at School." It will be sent you free upon request. Address Dept. NS9.

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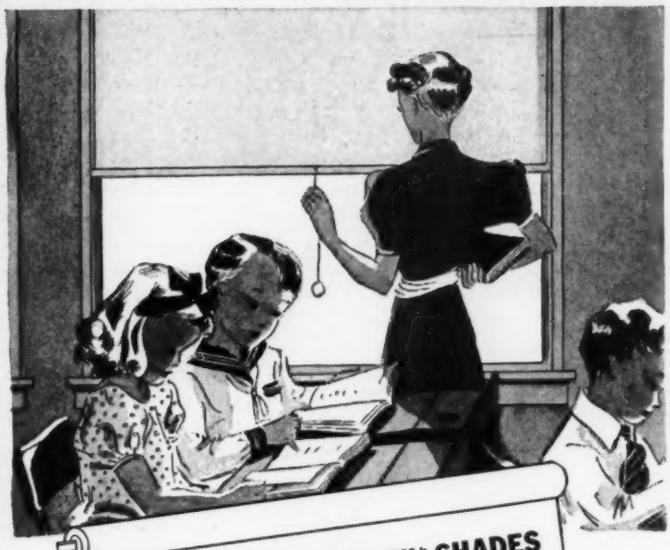
PROTECT YOUNG EYES!



TESTS PROVE "TONTINE"* SHADES ADMIT 75 TO 140% MORE LIGHT

"TONTINE" window shades are specially designed for school use. Scientifically made to admit light without glare, these translucent shades give young eyes the protection they need.

Opaque shades put a strain upon students' eyes by shutting out needed light. When outside disturbances or excessive sunlight require that the shades be drawn, you can be sure that children's eyes will not be subjected to strain if "Tontine" shades are used.

Two other features make these "Tontine" shades a truly economical purchase: They're washable, and they're extremely durable. Throughout years of service, periodic scrubbings with soap and water will keep "Tontine" shades looking as clean and fresh as new.

"Tontine" shades protect young eyes in the leading universities, private and public schools in the country. Write us for samples and complete information.

**"Tontine" is Du Pont's trade mark for its pyroxylin impregnated washable window shade cloth.*

Laboratory tests of translucency reveal: "Tontine" No. 500 Snow White transmits 73% more light than a similar color in painted cloth. "Tontine" No. 508 After Glow Gray Green transmits 140% more light than a similar color in painted cloth.

DU PONT

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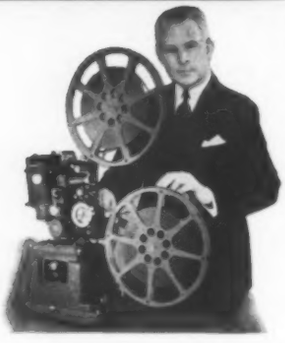
NEWBURGH *"Tontine" Sales* **NEW YORK**

* "Tontine" pyroxylin impregnated window shade cloth is a companion product to "Fabrikoid" and PX cloth, the rugged, long-lasting bindings for text books.

The Place of MOTION PICTURES in Education



Within the past few years, three developments have had a great influence on the position of motion pictures as an aid to education.

1. The remarkable increase in the number of 16 mm. films available from many sources.
2. The decided increase in true efficiency, illumination, convenience, simplicity of operation of 16 mm. silent projectors together with a marked *decrease* in cost.
3. The introduction of the new efficient low-cost 16 mm. sound-on-film projectors suitable for classroom or large auditorium work.

Motion pictures, of course, have their limitations. They are never intended to replace the teacher. They are correctly termed "Visual Aid," but as such they have proven definitely a means of increasing the effectiveness of teaching, shortening the time required for instruction, and decreasing the cost of education by reduction of retardation.

The Standard of Quality

Ampro Projectors are standard equipment in the schools of Chicago, Kansas City, Detroit, New York, Pittsburgh, Atlanta, Philadelphia, Boston, Los Angeles, Washington, Brooklyn, San Francisco—in scores of other cities, in thousands of schools, universities and museums.

Write for Circular—

Write today for Free Circulars on any of the units in the complete Ampro line.

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☐ Ampro Silent Projectors
☐ Ampro Convertible Models
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mer director of teacher training and head of the summer sessions at Cornell College, Mount Vernon, Iowa, and superintendent of the Mount Vernon schools.

PROF. M. E. LIGON, head of the department of secondary education, University of Kentucky, has been appointed acting dean of the college of education for one year, during the absence of DEAN W. S. TAYLOR, who has received a grant from the general education board for a year's study abroad.

DR. HENRY CLINTON MORRISON, professor of education, University of Chicago, has reached the retiring age limit and has become a professor emeritus.

DR. J. H. FOX of Colgate University has been named associate professor of education in the George Washington University.

DR. FREDERIC B. KNIGHT of the University of Iowa has been appointed head of the new division of education and applied psychology at Purdue.

Miscellaneous

JOHN S. MOUNT of the New Jersey state department of public instruction, has become editor of *School Business Affairs*, publication of the National Association of Public School Business Officials, of which he also is president. Mr. Mount succeeds PAUL SCHOLZ, who retired from the editor's chair because of ill health.

A. C. LAMB, formerly director of finance and maintenance engineer of the Hamtramck, Mich., public schools, is now associated with the Detroit board of education, department of buildings and grounds.

Retirements

C. F. HANSELMAN, principal of the Westwood High School of Cincinnati, has retired after forty years of teaching. He is a former president of the Schoolmasters' Club and principals' association.

WALLACE J. BRAMAN, superintendent of schools at Dansville, N. Y., is retiring from educational work this year, after serving as director of education in the Dansville schools for eighteen years.

DR. HUGO NEWMAN, assistant superintendent assigned to school districts in the Bronx, New York City, will retire this month, it has been announced. Doctor Newman formerly was principal of the Maxwell Teachers Training College.

Deaths

The REV. DR. WILLIAM C. KIDD, principal of the Lakewood High School, Lakewood, N. J., died recently. Doctor Kidd had also been pastor of the Hope Presbyterian Church for fifteen years. OLIVER B. LANE, principal of the junior high school, Lakewood, will succeed Doctor Kidd and also will continue his stewardship of the junior high school, a post he has held since 1923.

OMER GLEN PLATT, principal of the junior high school, Connersville, Ind., his wife and their son were killed by a freight train which struck their automobile at a crossing. The Platts were en route to Chicago where Mr. Platt was to enter the University of Chicago on a scholarship.

C. J. CARPENTER, for the last five years principal of Bliss Junior High School, St. Joseph, Mo., died recently in Halstead, Kan., following an operation.

DR. LESLIE VERNE CASE, retired superintendent of schools at Tarrytown, N. Y., died recently at the age of sixty-two years. In 1898 Doctor Case made the first discovery of radium-bearing ore in New York State.

G. O. FLOYD, JR., newly elected school superintendent at Vidalia, Ga., was killed recently in an automobile accident.

DR. JOHN A. W. HAAS, president-emeritus of Muhlenberg College, Easton, Pa., died recently. He would have been seventy-five years old on August 31. Doctor Haas was one of the widely known philosophers in the Lutheran Church, being regarded as an authority on Christian ethics and the history of philosophy.

HARLAN R. SNYDER, for nineteen years supervising principal of the high school at Catawissa, Pa., died in the Johns Hopkins Hospital, Baltimore, recently from uremic poisoning.

ADMINISTRATION

License Vocational Schools

Licensing of all qualified vocational schools in the state of Oregon by the state superintendent of public instruction is now under way, in compliance with a law passed by the last session of the state legislature. Under provisions of the act all private vocational schools, as well as correspondence schools, doing business in the state of Oregon must obtain a license from the state department of education. Agents soliciting for any vocational schools must obtain annual licenses.

"National Scandal"

Failure to identify and adequately to educate America's children of genius, our most precious national resource, is a major indictment against our educational system and deserves to be regarded as a national scandal, according to Prof. Harvey W. Zorbaugh, director of New York University's clinic for the social adjustment of the gifted.

A group of less than 2,000 school children who have an I.Q. of 180 and above will furnish tomorrow's social and tech-

Permits FLEXIBLE *Seating* ARRANGEMENTS

DESIGNED to permit flexible seating arrangements, this Heywood-Wakefield Unit Movable Desk is particularly suited to modern classroom plan and instruction. Because it combines both desk and chair, the Unit Movable proves an economical investment. The adjustment works on the wedge principle and holds the desk box securely in front facing position. Heavy gauge seamless steel tubing, completely sealed, and with broad bearing standards, assures rigidity and stability on the floor. Model illustrated has swivel type chair which is also adjustable. May we tell you more about this and other scientifically designed desks in the Heywood-Wakefield School Furniture Line?

HEYWOOD-WAKEFIELD

Established 1826 **GARDNER, MASS.**

PROMPT care is important in preventing infected wounds. Even minor wounds may become infected when antiseptic treatment is delayed. Children and adults report injuries promptly when Mercurochrome is used, because treatment is not painful.

Mercurochrome, H.W.&D.

(Dibrom-oxymercuri-fluorescein-sodium)

is non-irritating and exerts bactericidal and bacteriostatic action in wounds. Be prepared with Mercurochrome for the first aid care of all minor wounds and abrasions. In more serious cases, consult a physician.

HYNSON, WESTCOTT & DUNNING, INC.

Baltimore, Maryland

After a thorough investigation of the evidence for and against at the close of the last period of acceptance, the Council on Pharmacy and Chemistry of the American Medical Association again reaccepted (1935)

MERCUROCHROME, H. W. & D.

(Dibrom-ozymercuri-fluorescein-sodium)

SEES ALL—PLAYS ALL
UNIVERSAL
16MM SOUND PROJECTOR

The advanced Universal has won the approval of users in every field. This ruggedly constructed projector embodies all latest features. Throws brilliant image to desired screen size. True tone quality. Amplification for large or small audiences. Compactly portable in carrying case. *Universal is low in first cost.* Economical upkeep.

OUTSTANDING FEATURES

SOUND PROJECTOR

750-Watt projector lamp. Brilliant pictures. For all size reels. Heavy duty construction. Easy, simple operation. Trained operator not necessary. Adjustments quickly accessible. For sound or silent films. Full draft ventilation. Central oiling. Bausch & Lomb sound optical unit. Underwriter approved. Easy on film.

AMPLIFIER

Power for large or small groups. Phono or Microphone outlet. Tone-control. Volume control. Connection arranged so that error in operation is impossible.

SPEAKER

Dynamic Type. 12-inch cone. Special voice balance. 50 ft. voice line. Speaker in amplifier case for carrying.

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Universal Sound Projector
Division of
SENTRY SAFETY CONTROL CORP.
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nologic geniuses, Professor Zorbaugh told the Vassar Euthenics Institute recently.

Experience shows that unless such children are early identified and given suitable educational experience, many of them as adults are wholly unproductive from the social point of view, and many others are vastly less productive than they might be, he said.

Feminist Angle

The Business and Professional Women's Club of Santa Cruz, Calif., has requested that the city school board accord equal recognition to qualified women candidates for the position of school superintendent, without discrimination because of sex. While no women have as yet applied for the post, which became vacant on August 1, it is understood that one candidate already has been approved by the women's club.

Publicity Pays

A countywide Education Day to acquaint school patrons with the activities of the school system is sponsored biennially in Gloucester County, Virginia.

All schools are closed for the day and children assemble at one high school, 1,500 strong, for a parade composed of state police, mounted marshals, floats and decorated automobiles. One parade ended in a community sing on the campus, followed by an address by Dr. Sidney B. Hall, state superintendent of public instruction.

At noon the high school buildings are opened to the public. Assembled in the school are exhibits from all county schools. Approximately 1,200 school patrons observed the work created by children in the classrooms at the most recent observance of the day.

RADIO

On Puerto Rican Air

The Puerto Rico School of the Air, established in 1935 through a $17,000 grant from the Carnegie Corporation, was continued through the second year by a $15,000 appropriation from the legislature. Twenty-four series of programs are presented, all in Spanish, with the exception of one which is in English. An English language course also is given and a manual is available to aid students in preparing their lessons and in following broadcasts. Those completing the lessons receive certificates.

Japanese Broadcasts

Thirty-six per cent of the programs broadcast in Japan are devoted to educational subjects, according to *World Education.* These are divided into three departments providing for children, youths and adults. For children there are recreational hours, to which they listen at home, and also broadcast lessons supplementing their school work, given during school time. About 40 per cent of the country's primary schools listen in on educational broadcasts. For the young people, the objective is to improve spiritual and cultural living and to supply occupational knowledge. Adult programs cover art, literature, science and politics, with a special program being devoted to women.

Over the Waves

An educational broadcast over a distance of more than 6,700 miles was made from the World Federation of Education Associations conference in Tokyo, Japan, on August 7 by Uel W. Lamkin, secretary general of the association and president of the Missouri State Teachers College, Maryville, and Harry A. Carpenter, a member of the board of education of Rochester, N. Y. Mr. Carpenter represented the NBC, over which network the program was broadcast. Both reviewed the activities of the conference.

VISUAL EDUCATION

Professor Disney

A selected group of the animated screen pieces of Mickey Mouse, Donald Duck, the Three Little Pigs and other members of the famous Disney film cartoon family will be made available to the public schools within a few months.

Dr. Karl W. Bigelow, professor of education at Teachers College, Columbia University, who is working with the committee appointed by Will Hays on behalf of the Motion Picture Producers and Distributors of America, is now combing the vaults of Hollywood producers for pictures of educational value.

Doctor Bigelow said that a special elementary education panel of the larger committee, under the leadership of Marie Spottswood, principal of the Fieldston Lower School, Riverdale, the Bronx, had been impressed by the possible educational uses of certain animated films, especially those by Disney. Miss Spottswood said the committee had seen nothing objectionable in some Popeye or Betty Boop films but had yet to find one of these cartoons that possessed educational properties.

Slides Exceed Films

That applications and exhibitions for slide sets have exceeded those for motion pictures is revealed in statistics compiled for the annual report of the bureau of visual instruction of the extension division of the University of Texas. Use of both devices has increased.

The extreme accuracy of precision machined

HOLMES Projectors

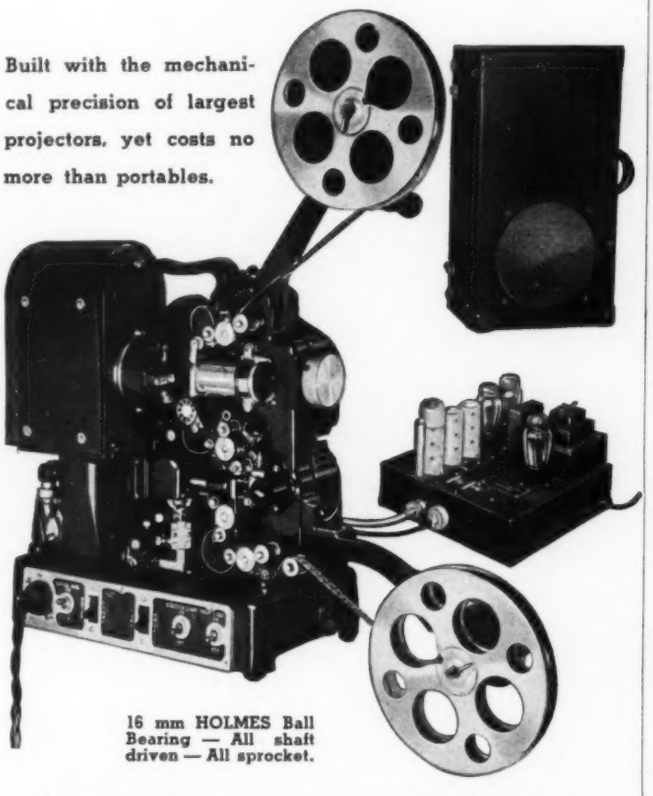
ASSURES ROCK STEADY BRILLIANT PICTURES AT ALL TIMES.

Accurate projector speed

Clear toned and powerful sound reproduction

Minimum annoyance to audience because of film breakage, illumination failures or slow threading.

Built with the mechanical precision of largest projectors, yet costs no more than portables.



16 mm HOLMES Ball Bearing — All shaft driven — All sprocket.

Many exclusive features found only in a HOLMES is the reason it is favored by professional operators for portable uses.

Write for latest catalog and prices.

HOLMES 16 mm 35 mm **PROJECTORS**

CHOICE OF PROFESSIONAL OPERATORS EVERYWHERE

HOLMES PROJECTOR CO., 1814 Orchard St., Chicago

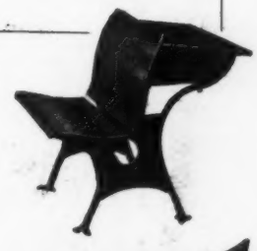
IN ALL TYPES OF CLASSROOM AND AUDITORIUM SEATING

THIS SYMBOL

IRWIN *Seating*

HAS CONSISTENTLY IDENTIFIED THE FINEST CONSTRUCTION, ADVANCED DESIGN and MODERATE PRICES FOR MORE THAN 30 YEARS.

Write for our new catalog. It's a reliable index to the "best buys" in school and auditorium seating.



IRWIN *Seating Company*

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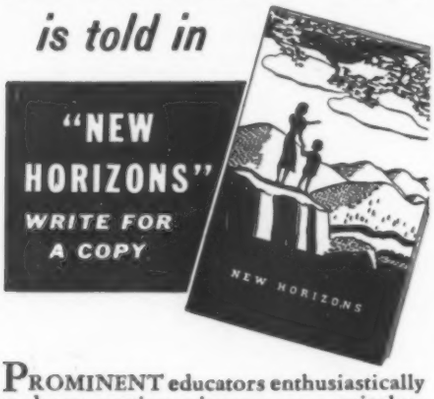
NEW YORK OFFICE, 381 FOURTH AVE. TERRITORIAL DISTRIBUTORS THROUGHOUT THE UNITED STATES

How Motion Pictures Speed Learning . . . Save Teachers' Time

is told in



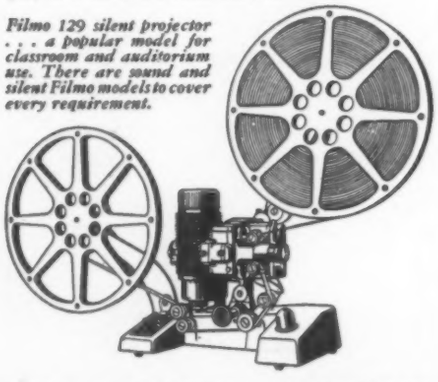
PROMINENT educators enthusiastically endorse motion pictures as a priceless contribution to the science of teaching. This remarkably effective educational tool is fully discussed in the book *New Horizons*, just published.

Why pupils learn from 20% to 90% more in shorter time and forget less, by actual, unbiased tests, is explained. The subjects that can be taught better by motion pictures are discussed; you will be surprised at the wide application of this medium. The comprehensive selection of films available is shown. The personal experiences of leading educators with motion pictures are included and their comments quoted. Suggested ways by which the equipment can be made to pay for itself are given, together with points to keep in mind when equipment is selected.

In short, *New Horizons* is one of the most complete treatments of the subject of school motion pictures ever published.

It is free to anyone interested in educational progress. No obligation whatever. Fill out and mail the coupon now.

Filmo 129 silent projector . . . a popular model for classroom and auditorium use. There are sound and silent Filmo models to cover every requirement.



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1855 Larchmont Avenue, Chicago, Ill.
Gentlemen: Please mail me a copy of your new book, *New Horizons*. No obligation assumed.

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Position.....
School.....
Address.....
City.....*State*.....

BELL & HOWELL

Where there were 2,623 applications for slide sets, there have been 1,897 applications for motion pictures, according to Mrs. Charles Joe Moore, director, bureau of visual instruction. Exhibitions of slide sets numbered 9,467 in comparison to 5,695 exhibitions of motion pictures. The attendance, however, at film exhibitions exceeded that of slide showings by slightly more than 50,000, the total attendance at film exhibitions being 752,908 in comparison with 698,313 at slide exhibitions.

New Location

The Museum of Modern Art film library in New York City will occupy half of the fourth floor of the new museum to be erected at a cost of approximately a million dollars on a site at West Fifty-Fourth Street donated by the Rockefellers. The film library has been located at 485 Madison Avenue since it was founded in 1935, because of the crowded conditions in the present museum building. It will have offices, a projection room and shipping quarters.

Construction Film

The construction of San Francisco's new bridge has been photographed and is being offered by Bell & Howell Company's film division. A narrative and musical background accompany the photography.

Government Films

The National Emergency Council in Washington, D. C., has available lists of motion pictures made by governmental agencies. The council will help schools obtain the free loan of these films.

PUBLICATIONS

Illustrated Geographic News

The National Geographic Society will resume publication of its illustrated Geographical News Bulletins for teachers early in October, it has announced. The bulletins are issued weekly, five bulletins to the weekly set, for thirty weeks of the school year to teachers, librarians, college and normal students, as a service and are not planned for financial profit.

Parental Guide Lists

For parents and parent-teacher groups, the U. S. Office of Education has issued two free lists of publications, one a guide list of governmental publications for parents, and the other a bibliography entitled "Good References on Education for Family Life." Both lists were prepared by Ellen C. Lombard, specialist in parent education.

Five-Year Plan

"Understand your schools" is the slogan of the five-year public relations program inaugurated in the public schools of Mount Lebanon, Pa. In a series of bulletins issued by the schools, the successive objectives will be information, interpretation, evaluation and achievement for the first four years. Objectives of the fifth year and following years will be developed from results of the present program, which is proving most effective. At the present time emphasis is being placed on the work carried on in each grade and on methods of presentation.

Films for the School Screen

Biology: III—Trees

Planting and Care of Trees—Life cycles of the apple-tree tent caterpillar and other leaf pests and their control; planting of a grafted tree. 15 minutes. 16 mm., silent. For purchase. Elementary, junior and senior high schools. Teaching Films Division, Eastman Kodak Company, Rochester, N. Y.

Life—From Seed to Trees—1 reel. 16 mm., silent. For rent or for purchase. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

Forest Preservation—Reforestation from planting of seed to mature timber crop. 2 reels. 16 mm., silent. For rent or for purchase. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

How Forests Serve—Designed to teach the values of the forest to mankind. 1 reel. 16 mm., silent. For loan. U. S. Department of Agriculture, Office of Motion Pictures, Washington, D. C.

Motherly Oak—Animals it shelters; stag beetle, toad, squirrel, lizard, hornet, ant and caterpillar. 1 reel. 16 mm., silent. For rent or for purchase. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

Out of the Forest—Reforestation. 1 reel. 16 mm., silent. For rent or for purchase. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

Leaves—Structure, functions and types of leaves. The actual process of food-making is revealed by animation. For purchase. 10 minutes. 16 and 35 mm., sound. Erpi Picture Consultants, Inc., 250 West Fifty-Seventh Street, New York City.

A B C of Forestry—Fundamentals of tree growth and good forestry practices. 1 reel. 16 and 35 mm., silent and sound. For loan. U. S. Department of Agriculture, Office of Motion Pictures, Washington, D. C.

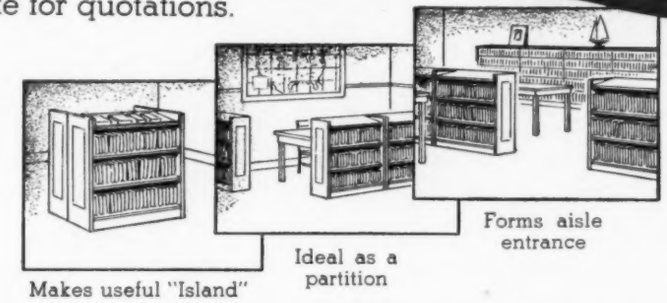
New... Counter Height Shelving

with Sloping Top . . . has many uses

Ideal for adding extra space—especially when there is no more room for wall shelving. Stands 3 ft. 6 inches high: Shelves are 10, 12, 16, 20 or 24 inches in width. Furnished either single or double faced.

New sloping shelf illustrated permits placing of large books for easy reference or front cover display. Also furnished with flat top or with trough-shaped displayer.

Stocked in standard light or dark finish oak. Also made in maple with any desired finish. Write for quotations.



Makes useful "Island" — Ideal as a partition — Forms aisle entrance

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Makers of Library Furniture and Supplies

AT THE HEAD OF THE CLASS IN CAFETERIA EQUIPMENT

Pix Equipment passes every examination with flying colors . . . whether it's in attractiveness of design, sturdiness of construction or economy of operation. It is planned and built by experienced technicians to give many years of efficient and uninterrupted service.

School executives and their architects are invited to make full use of our engineering and consultation staff—whether the problem is one of modernizing present food service facilities, planning a new installation or buying single pieces of cafeteria and kitchen equipment.

ALBERT PICK CO., INC.
2159 PERSHING ROAD, CHICAGO

• *Illustrated is a view of the Pix equipped cafeteria of Lindbloom High School, Chicago.*

"And this, Mrs. Smith, is one of our washrooms"

WHEN fond parents visit your school and ask to be shown around, do your tours of inspection include your washrooms? Or do you hurry by these rooms, hoping that no embarrassing questions will be asked about the appointments?

You'll be proud to include your washrooms in these tours of inspection if they're equipped the modern way—with Ivory Soap Dispensers. For these modern dispensers are unusually attractive, remarkably efficient. And they deliver a soap recognized by every parent as one of America's finest—pure, gentle, rich lathering Ivory Soap.

Ivory Dispensers put no heavy strain on school budgets. Their first cost is low and they'll cut your soap bills to rock-bottom. Let us show you how little it will cost to give your school Ivory Dispenser service.

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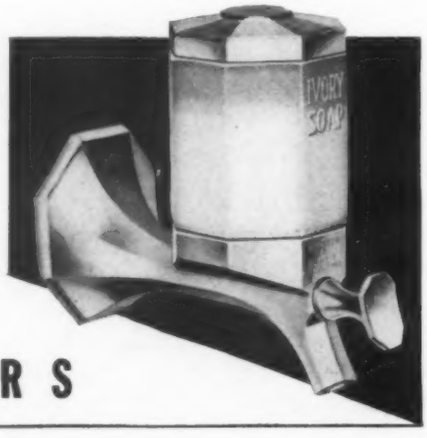
Ivory Dispensers deliver genuine Ivory Soap in fine, free-flowing flakes or granules. Provide safe, thorough, gentle cleansing for both face and hands. Easy to install—dispensers fasten rigidly to either vertical or horizontal surfaces. No complicated parts to get out of order. No parts to rust, tarnish or corrode. Easy to refill. Tamper-proof. Low in first cost and in up-keep. Write for descriptive folder.



IVORY SOAP DISPENSERS

BUILDINGS

PWA School Projects

Public Works Administrator Harold L. Ickes announced on August 18 that President Roosevelt has approved a sum of $18,033,458 for school construction projects in forty-one states. Last October it was reported to the National Council on Schoolhouse Construction that the total schoolhouse construction program for a three-year period had reached the estimated cost of $750,000,000 and that 5,133 PWA approved projects were estimated to cost a half billion dollars.

High School Museum

When the Monrovia-Arcadia-Duarte High School, Monrovia, Calif., was given a large collection of museum specimens by a local collector a number of years ago, the school had no way to display them. As a result the collection was stored away in the basement. Some months ago a WPA project made possible the display, mounting and classification of the specimens by supplying a mineralogist, an archeologist, a cabinet maker and clerical help. The graduating class presented the school with several display cabinets, which were installed in the science building, affording space for a part of the collection, thus making it available for class study.

Plant Operating Budget

For the first time since 1932 the money allocated for the operation and maintenance of New York City school plants has been increased to a sum equal to 1½ per cent of the accumulated cost of the buildings and equipment. While last year about $3,500,000 was set aside for this purpose, the 1938 budget calls for $6,500,000.

General repairs, replacements, alterations, furniture, classroom equipment and fire-prevention work receive substantial increases.

Wage increases for custodial services total $492,085.

To speed the construction of school buildings, the committee proposes to enlarge the staff of architects and draftsmen. Seventy-three new positions are asked in this department, at a cost of $113,816.

Preserve School-Fortress

To save the ancient octagonal Sodom School in Northumberland County, Pennsylvania, erected about 1812, pupils and teachers waged a successful campaign. It is thought that this ancient building, which was left unfinished when its builders were called to war in 1812, was constructed with many sides in order to make surprise attack by Indians difficult and to simplify its defense.

Back to school bursts young America! Back to schools made spick and span by summer cleaning—especially the floors, which in greater number every year are renewed and made clean and sanitary by Finnell Machines and Finishes. This year marks Finnell's 31st year of service to schools. For almost a third of a century the Finnell System has been keeping new floors new—making old floors clean and sanitary—at less cost than obsolete, makeshift methods. Proof? For the asking. In a demonstration in your own buildings, if you wish. Latest illustrated circular on request. Address FINNELL SYSTEM, INC., 209 East Street, Elkhart, Indiana.

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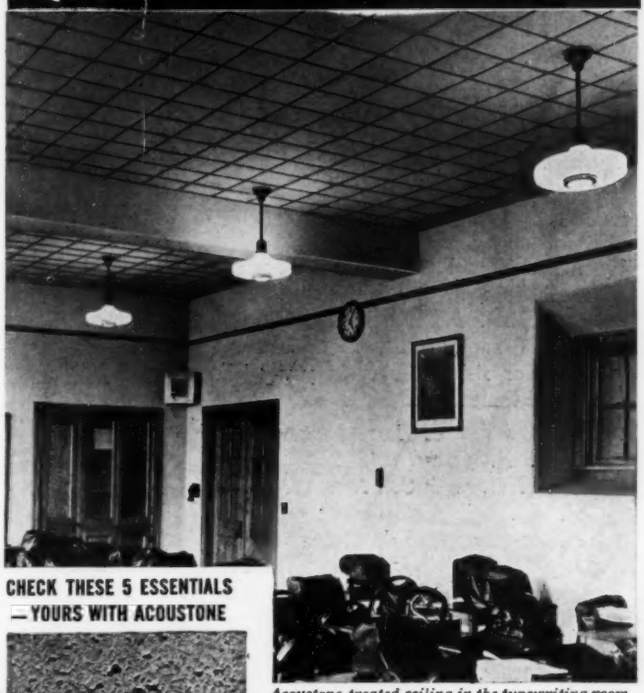

Acoustone-treated ceiling in the typewriting room of the Vocational School at Racine, Wis.

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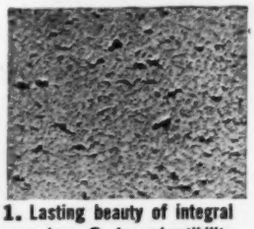

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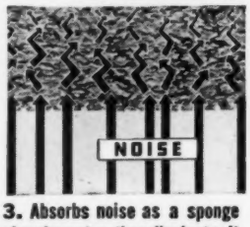

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THE BOOKSHELF • • • •

TALLEYRAND. *By Comte de Saint-Aulaire. Translated from the French by George Frederic Lees and Frederick J. Stephens. New York: The Macmillan Company,* 1937. *Pp.* xi + 371. $3.50.

An able French diplomat and scholar produces here the best biography of an individual who, heretofore, has suffered by the unpalatable mixture of certain personal peculiarities and traits with statesmanship. Here is a clearly limned portrait of Talleyrand as the statesman, divorced or rising above, as you wish, his carnal limitations.

A DECLARATION OF INTERDEPENDENCE. *By H. A. Overstreet. New York: W. W. Norton & Co., Inc.,* 1937. *Pp.* 284. $3.

Sensible attempt to develop a rational social philosophy from the present day American point of view. Pleasing reading because of the absence of the almost inevitable "formula" for charting the future exactly.

COLLECTIVISM, A FALSE UTOPIA. *By William Henry Chamberlin. New York: The Macmillan Company,* 1937. *Pp.* vi + 265. $2.

A newspaper man of unusual gifts writes out of his personal experiences a most significant book on certain fallacies common to both soviet and fascist dictatorships. His thesis is based on the absence of personal liberties in totalitarian practice. Good critique of the new Russian constitution. Recommended for careful reading.

THE SPIRIT AND STRUCTURE OF GERMAN FASCISM. *By Robert A. Brady. New York: The Viking Press, Inc.,* 1937. *Pp.* xix + 420. $3.

A most penetrating study of fascist concepts and practices in Germany. Capitalism emerges as a monopoly with the state completely within its control. A timely, unusual book.

AMATEUR POWER WORKING TOOLS. *By A. Frederick Collins. Illustrated. Philadelphia: J. B. Lippincott Company,* 1937. *Pp.* xv + 188. $1.75.

Good hobby book for those who work in wood. Recommended for secondary libraries.

NEWSPAPERS AND THE NEWS. *By Susan M. Kingsbury, Hornell Hart and Associates. New York: G. P. Putnam's Sons,* 1937. *Pp.* xi + 238. $2.50.

An objective measurement of ethical and unethical behavior by representative newspapers. Both as to technique and findings this survey should be of real value to administrators in a proscribed emotional area of social interpretation.

THE RISE OF A UNIVERSITY. *Volume I: The Later Days of Old Columbia College. From the Annual Reports of Frederick A. P. Barnard, President of Columbia College,* 1864-89. *Edited by William F. Russell. New York: Columbia University Press,* 1937. *Pp.* xi + 415. $3.75.

Significant extracts from the annual reports of President Barnard covering topics pertinent at the present time.

THE RISE OF A UNIVERSITY. *Volume II: The University in Action. From the Annual Reports,* 1902-35, *of Nicholas Murray Butler, President of Columbia University. Edited by Edward C. Elliott. New York: Columbia University Press,* 1937. *Pp.* xvi + 515. $3.75.

The second volume presents extracts from the reports of Nicholas Murray Butler from 1905 to 1935.

SOUND DRIVING PRACTICES. *Illustrated. Third Pamphlet of the Sportsmanlike Driving Series of Five on Traffic, Safety and Driving. Washington, D.C.: American Automobile Association,* 1937. *Pp.* 108. *Copies secured through AAA Motor Clubs. (Paper Cover).*

Here's a manual that may be successfully used in courses designed to give the pupil a knowledge of intelligent driving.

WHERE ARE WE GOING? *By E. C. Harwood. Cambridge, Mass.: American Institute for Economic Research,* 1937. *Pp.* 92. $1 *(Paper Cover).*

Here is straight talk on aspects of our economic situation, unusually frank and apparently without political or economic bias. While it does not formulate a final answer it does present many provoking and some dangerous possibilities. Read it by all means and judge for yourself.

WHO'S WHO IN THE ZOO. *By the Staff of the Federal Writers' Project of New York City. General Editor, Ralph De Sola. New York: Reynal & Hitchcock, Inc.,* 1937. *Illustrated. Pp.* 211. $1.69.

WPA produces an unusual visual and descriptive product that will be an asset to any elementary library. Good pictures. Narrative handled in an interesting manner.

ARE YOU AWAKE? *By Florence E. Marshall. Evanston, Ill.: National WCTU Publishing House,* 1936. *Pp.* 96. $0.50 *each;* $4 *per dozen;* $30 *per hundred (Paper Cover).*

A WCTU songbird presents ninety-three pages of her own effort in verse covering fable, story and song, in the perennial drive against King Alcohol.

SECONDARY EDUCATION PRINCIPLES AND PRACTICES. *By Fred Engelhardt and Alfred Victor Overn. Appleton-Century Series in Administration, edited by Fred C. Ayer and Fred Engelhardt. New York: D. Appleton-Century Company, Inc.,* 1937. *Pp.* xvi + 623. $2.75.

Designed as a text for secondary education and built around the principle of unification.

THE JUNIOR HIGH SCHOOL. *By Ralph W. Pringle. (First Edition). McGraw-Hill Series in Education. New York: McGraw-Hill Book Company, Inc.,* 1937. *Pp.* xii + 408. $3.

The lower secondary school approached from the psychological standpoint. Conventional organization of materials. Text and professional reading.

Just Off the Press

HOMEWORK. *Board of Education Educational Pamphlet No.* 110. *Printed and Published by His Majesty's Stationery Office, London. New York: Distributed by British Library of Information,* 1937. *Pp.* 78. $0.31 *(Paper Cover).*

NEW WORLD OF CHEMISTRY. *By Bernard Jaffe. New York: Silver Burdett Company,* 1937. *Pp.* xii+566+30. $1.80.

THE WORLD AND MAN AS SCIENCE SEES THEM. *Edited by Forest Ray Moulton. Illustrated. (Educational Edition). Chicago: The University of Chicago Press,* 1937. *Pp.* xix+533. $3.

THE CERTIFICATION AND TRAINING OF TEACHERS IN MICHIGAN. *Book One of the Report of the Committee on Teacher Training of the Michigan Education Association. Bulletin No. 27. Lansing, Mich.: Michigan Education Association,* 1937. *Pp.* 247. $1.50 *(Paper Cover).*

HUMPHREY THE PIG. *By Marjorie Knight. Illustrated by Clinton Knight. New York: E. P. Dutton & Co. Inc.,* 1937. *Pp.* 45. $1.

A LIST OF SPELLING DIFFICULTIES IN 3,876 WORDS. *By Arthur I. Gates. New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* 166. $2.10.

LEARNING TO BE GOOD PARENTS. *Talks to Fathers and Mothers. By Eleanor Saltzman. Boston: Manthorne & Burack, Inc.,* 1937. *Pp.* 55. $0.25 *(Paper Cover).*

AN INTRODUCTION TO THESIS WRITING. *For Students of Education. By Warren R. Good. Ann Arbor, Mich.: The Ann Arbor Press,* 1937. *Pp.* 48. $0.50 *(Paper Cover).*

SCIENCE EXPERIENCES WITH HOME EQUIPMENT. *By Carleton John Lynde. Scranton, Pa.: International Textbook Company,* 1937. *Pp.* xiii+226. $1.25.

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Walrus laboratory and vocational furniture, and Walrus equipment for cafeterias, are backed by nearly forty years of successful manufacturing experience.

This picture shows Walrus equipment in the Domestic Science Department of the Northwest Junior High School of San Antonio, Texas.

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TRADE MARK REG. U.S. PAT. OFF.

Any floor can withstand perpetual traffic when protected with SHINE-ALL, the nationally recommended liquid cleanser.

SHINE-ALL is a neutral liquid cleanser, contains no abrasives, ammonia, lye or caustics, and cleans finished woodwork, porcelain, painted and enameled surfaces, as well as all types of flooring, without fear of injury.

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NOTES FOR BUYERS • • •

Synthetic Sob Story

The silkworms are sighing, the Russian calf crying, the whole animal kingdom is losing its caste.

DuPontifex Maximus, with his cellulose acetate, has already forced the silkworms on a thirty-hour week. Now comes an invention called Cellocraft that resembles Russian calf, is as tough as rhinoceros hide and is making sheep's eyes at schoolmen.

Cellocraft is an art product, made by the Burgess Battery Company of Freeport, Ill. With simple modeling tools it may be tooled like the finest Russian leather. Cellocraft comes in sheets, nine in the modeling kit, and may be punched, laced or tacked to a wood base or forms.

What has set the Russian calf to bawling is the fact that Cellocraft costs only one-fourth as much as real leather and takes little modeling skill.

Design for Stepping

Keep this confidential, boys, but our present pash is a new little something called Linotile. With a bit of handling, we could produce an effect that would floor you, or a floor that would affect you, one or t'other.

If left strictly to our own desires, we would work up with Linotile a Design for Stepping in agate, travertine and Algerian red. Brothers, that would put lilt into your library or opulence into your office or congestion into your corridors.

Maybe you aren't ready for anything serious — just want to play around with an idea for a few months — we still tlfink you have a chance with Linotile. An introduction is arranged through the producer, Armstrong Cork Products Company, Lancaster, Pa. Just write — ever so sweetly — and ask for a peep at something smart in school flooring.

Antiquarians Only

Antiquarians and Collectors of Primitive Industrial Americana, here be treasure trove. Proceed forthwith in any direction until you reach ancient brick edifice marked "Public School." Enter by main portal, walk thirteen steps downward and, if near lunch hour, follow nose to cafeteria cave. At cave entrance veer sharply left, grope way to small recess and behold early specimen of electric refrigerator. This item is authentic Predepression.

In addition to quaint appearance and to utter inadequacy to present storage demands and safe temperature requirements, this collector's bit is chiefly noted for excessive cost of operation.

Arrange for immediate transfer to historical museum or private collection and, in partial payment, send school superintendent information regarding five new models of storage refrigerator just announced by General Electric, Nela Park, Cleveland.

Puff of Gas

If you've been writing for literature on the wilds of Kamchatka, instead of confessing to your cafeteria manager that she'll have to ring in the new school year with the old range, hearken. You can conquer that escapist tendency, my man, if you'll change your reading matter. Read about the small, sturdy Garland gas range that the Detroit-Michigan Stove Company, Detroit, has just put on the market.

This little item was planned for small schools and small budgets. Its size, 54 by 27 inches, will leave room in your kitchen for the cook, which may be the big handicap in your present arrangements.

Compactness is the keynote, in case you care about keynotes. It combines facilities for baking, top cooking, broiling and grid work. With just a pinch more of your pin money, you get oven heat control and complete insulation of the oven unit. Imagine!

Day After Labor Day

Shaded from the September sun, the Schoolhouse waits, in all her autumnal allure. June saw her jaded, but a summer's grooming has restored her to a new Age of Innocence and this, she trusts, will protect her from the immediate ravages of a barbarian horde. Perhaps these young savages can gradually be brought under dominion.

"Plop!" goes Joe into one of the new classroom seats. Round shouldered, loose jointed, floppy Joe, who sits a saddle with ease but regards any chair as his own private slouching ground.

Heck, slouching isn't going to be so soft, Joe decides. These new seats seem to fit the back and make sitting up pleasanter than sagging.

Joe looks around and in his newfound erectness feels self-importance. Perhaps a guy can learn to sit this steel and wood contraption as staunchly as a leather saddle. Who knows, there may be more to this school stuff than just a place to pass nine long months until next summer.

The schoolhouse is saucy in its new paint job. The teacher has class and looks sort of human. And these new seats — why, gosh, they're like a new mount; you can sit them like a general. What does it say on this seal? American Seating Company, Grand Rapids, Mich. O. K., Grand Rapids. Ride 'em, General Joe.

Hear Ye! Hear Ye!

Only the neighbors' radios, parties and quarrels make us wish we were hard of hearing. Most of the time, we recognize that hearing is a downright convenience.

For school children inconvenienced and often retarded by poor hearing, a new aid is available. Twenty-nine of these have recently been installed in Chicago schools, and the Central Institute for the Deaf in St. Louis is enthusiastic over it. The American Medical Association has found it acceptable.

A typical classroom installation consists of a microphone and amplifier in one compact unit mounted on an extension stand. Any number of units may be connected. Double ear phones are provided pupils.

The Aurex Corporation, 2400 Sheffield Avenue, Chicago, manufactures this help for those handicapped in hearing.

Pickens Approves

Principal Pickens has a vice — coffee schlooking. During the first trying weeks of school, the urge is uncontrollable. On occasions not infrequent he slips down the stairs to the cafeteria kitchen seeking the stimulation of strong drink. Mrs. Brown caters to the craving, and think you not that she goes unrewarded.

When she first brought up the subject of KitchenAid, Principal Pickens was all suspicion. He envisioned a small army of retainers on the school budget. Later he was induced to glance at some Hobart literature as he sat sipping on a kitchen stool.

Day by day Mrs. Brown built up her case. It would be an economy. It would be more sanitary. It would eliminate help and the kitchen was already overcrowded. It would speed up service. It would *improve the coffee,* since it could be freshly ground.

Now Principal Pickens is prouder than Mrs. Brown, for the school is a possessor of a KitchenAid, newly delivered from the Hobart Manufacturing Company with headquarters in Troy, Ohio. Mrs. Brown plans to do a little coffee grinding with it, first of all.

LOOKING FORWARD

An Unusual President

DR. TYLER DENNETT of Williams College resigned as president at the end of the last academic year to be succeeded by his good friend, James Phinney Baxter. This fact would not in itself be cause for extended comment because the tenure of college presidents in the United States is nowhere near as secure as that of the professorial staff. However, in this case the reason given is absolutely astounding. According to the best reports Doctor Dennett had not been seeing in the expected "eye to eye" manner with his trustees for some time.

Doctor Dennett appears to be one of those individuals, so unusual in American education, who believes that men are superior to buildings. He constantly objected to certain enlargements of the physical plant. When the trustees wanted to buy the old Greylock Hotel for the college he objected with some warmth and greater persistence. Being denied a suspensory vote power over financial matters by the trustees, he resigned.

The truth of the matter is that practically all of the colleges and university campuses are overbuilt. Not only are existing buildings used a minimum of time (the best use ever ascertained was 32 per cent on an eight-hour day), but they are also cluttered with monuments, a few of which are useful, but more frequently represent only a donor's idea of a tombstone larger than those permitted in the modern "garden of memories."

Thus the college campus throughout the country is rapidly assuming memorial park tendencies. Few presidents can resist buildings and scarcely an institution exists that exercises adequate control over the type, location and nature of these memorials. The donor's architect in too many instances is as much concerned with designing a monument for himself as for the donor. Educational needs are a distinctly tertiary consideration. There are actual instances in which classrooms, when permitted in some monumental buildings, have been designed without windows and means of heating; others have been impossible of direct access from corridors; some structures, with a use-capacity for less than 200 students, cover a city block.

As in the case of an automobile, it is not the initial cost but the upkeep that is really disturbing. Every building, regardless of use-capacity, must be heated, lighted, cleaned and repaired during its normal life. The more a college has invested in plant, the less it can invest in men who are to man these plants. With the choice between educational and monumental values, the educational values too frequently suffer.

There exists today no major institution of higher learning that could not, by balancing its building-use program on the basis of an eight or a ten-hour day, accommodate from three to four times its current registration. Possibly the institutions are not aware of this fact since they view a building emotionally and not as a mechanical means for housing students, teachers, books and equipment.

Few have ever measured their daily building-use to discover that most classrooms are lucky if they average three hours of classes per day. Except for progressive replacement, expansion in laboratory units or possibly dormitories there is relatively little need for college buildings for some time to come. Keeping up and expanding the plant make it harder to increase salaries. So the good teacher continues to be underpaid and does not realize that one of the reasons is that these campus monuments require so large a share of the college dollar.

When a college president, therefore, admits that he has enough buildings, positively does not want any more and expressly needs the money to improve teaching, that is news! American colleges and universities need more presidents like Dr. Tyler Dennett, and fewer monument builders.

The Married Teacher

THE public schools lose annually a large number of their better women teachers who at the end of three or four years of service, just at the time when they are beginning to show promise, decide to follow the biologic and social urge to mate and rear a family.

This normal and highly desirable decision unfortunately is still considered a misdemeanor by conservative boards of education and is usually the cause for immediate dismissal. And so each year the procession grows longer as able instructors are forced to retire from their chosen profession following their marriage.

It seems a pity that these ideas should prevail after the state has expended several thousand dollars to train each teacher and the school district has spent at least $2,000 more over a three-year period integrating effectively this training with practical experience. So long as disqualification by marriage represents a dominant employment policy the schools will suffer and it will be increasingly difficult to build a strong, stable teaching profession.

Competent authorities are in agreement that teachers who are leading a normal emotional life and who have had the rich experience of bearing and rearing children of their own, on the whole, make much better teachers than those who have been denied this privilege by reactionary and obsolete rules. There is a tendency toward a more sympathetic attitude and greater understanding of child problems. Parenthood is a broadening and enriching educational experience that will be reflected in the classroom. There can be no objection on this score.

Board of education members and superintendents opposed to married women teachers frequently stress the economic aspect. According to their belief it is not fair to allow both husband and wife to work; the women's place is in the home; incompetent married women teachers cannot be easily discharged because their husbands object, and married women teachers are less docile in submitting to bureaucratic discipline.

The first reason may be quickly dismissed. It is none of a board of education's business to attempt regulation of the individual life of teachers in any sphere. The board's only interest in individual action is through the reflection of personal conduct that becomes prejudicial to their teaching and that problem can be cared for in its proper place. Marrying and rearing a family cannot be classified as prejudicial personal conduct. Incompetent single teachers present the same emotional problems in case of discharge as do married teachers and, finally, it is not any competent teacher's job to be a docile technician subject to the same manipulation and autocratic management as if she were mere unskilled mechanical labor.

The remedy is a challenge to the teaching profession since it is doubtful whether the legal organization will work aggressively for a change. The possibility of developing a sustaining public opinion among the many types of women's organizations may be accomplished through an educational campaign carried on by state professional teacher organizations, the League of Women Voters, the National Congress of Parents and Teachers, the American Association of University Women, the General Federation of Women's Clubs and the National Federation of Business and Professional Women's Clubs, who in this field should offer a most receptive and sympathetic audience to this campaign for better teachers.

Conservative and dominantly male boards of education cannot maintain these unreasonable and undesirable restrictions against the marriage of women teachers in the face of a strongly disapproving general feminine opinion. It is also quite certain that the men will not act of their own accord. So it becomes distinctly a women's job to remove one of the remaining sex discriminations.

Flogging Children

UNLESS the tendency toward the bizarre in certain small Ohio towns is checked, this state promises to build for itself an unenviable school reputation. Last year the country was startled by "radio whippings" wherein one of the educational executives broadcast his physical punishment of immature children to hundreds of their classmates while the school program halted for this purpose.

Now, the Powhatan community, under the joint auspices of the mayor, the town marshal and a minister, is using public flogging as a stimulus to good behavior. According to press reports of early summer twenty-one child offenders who "played hookey" from school for some reason were rounded up by the marshal.

As an expiation of this heinous sin, in which the older generation itself occasionally engaged without dire results, the children were required to report every evening for a month for a public flogging over a barrel! Apparently this exhibition of group brutality brought no protest from either the school authorities or the parents. What a commentary on the American small town!

There is nothing that can be said for this form of discipline save that it appears to satisfy the sadistic tendencies of those who perform the task and those who take pleasure in watching pain inflicted upon children. We presume that the minister would defend his ungodly conduct by claiming that he was doing good.

However, the harm that might have been accomplished through the unintelligent use of the method is worth thinking about, as well as the thrill of striking a defenseless child who is for the time being without the ability to retaliate. How much better it would be if the minister remained in his accustomed pulpit and if the educational leaders spoke out boldly against this perverted practice. Through these utterly indefensible practices Powhatan may be laying up much more future troubles with its younger generation than it realizes. Solomon's wisdom was not designed for the democratic way of life.

Convention Entertainment

WHEN the American disease of regional and national conventions started in the dim past with the gathering of small groups it was the tradition that the host community provide entertainment for its guests.

Early church conferences slept and fed the conference delegates in private homes. As the convention practice grew in size and frequency, the home was perforce succeeded by the hotel but the tradition of entertainment lingered.

Every national educational convention expects some free entertainment from the host city and every convention city tries to do itself proud in providing free hospitality of this type to visiting delegates and to those who "just come for the ride." Funds for this purpose are raised from the teachers by "voluntary and spontaneous contributions."

Not only is a considerable sum spent on the National Education Association's summer meetings, but every school system entertaining the American Association of School Administrators also feels constrained to offer something unusual to the visitors. Sometimes these entertainments are so attractive that they interfere considerably with the smooth operation of the program.

It does appear as if the time had long since arrived when the conventions can supply their own individual entertainment and not levy upon already heavily burdened teachers for "voluntary contributions" to official entertainment. The use of public monies for this purpose is also a dubious practice, particularly when so many centers have not yet restored their depression cuts.

It is sincerely hoped that Atlantic City will have the courage to break this traditional precedent and furnish nothing to the visiting administrators next February except the usual facilities and the small personal courtesy of being considered welcome guests. If Atlantic City does so, other cities may follow the lead and abolish a practice that is neither desirable nor particularly attractive to the individual teacher despite its apparent "voluntary" nature.

Tests for Stability

EVERY school system is confronted with the problem of the unstable teacher. Mild insanity is a difficult matter to prove in courts of law and tenure legislation makes it extremely difficult to discharge unstable teachers who have not yet reached the stage of being social menaces. This difficulty may be due in part to a fact that many administrators have frequently observed. Many inadequate and unstable teachers have been able through the progressive development of the sympathy technique to root stronger emotional attachments among the children than their more competent colleagues who disdain child exploitation for their own personal gain.

In statistical proportions the teaching profession probably has no more such cases than any other group with which the teachers may be compared, although some psychiatrists believe that unwarranted restrictions against the marriage of women teachers do produce more difficulty in the teaching profession than in other walks of life. Regardless of the cause, the large city school administrator faces this problem constantly and the small town system meets it periodically.

In this instance prevention is much easier than cure. It is highly desirable as a part of progressive personnel policy to avoid hiring individuals who promise to become problem cases later in their career. Psychiatrists maintain that it is entirely feasible to determine through careful examination a large proportion of individuals who will develop weaknesses around mid-life.

The first responsibility lies within the training institution itself. By use of proper diagnostic examinations and tests emotional stability may be determined before a graduate is recommended for certification and steps may be taken to redirect these potentially unstable individuals into different lines of work. Large city school systems are sufficiently well equipped to carry on such examinations within their own clinics and thus save themselves much trouble later on. Superintendents in systems too small to provide this service may well demand of the training institutions professional (medical) assurance that the candidates recommended are clearly above the doubtful line with respect to emotional stability.

Field demand for such assurance will force the teacher training institutions to provide for these examinations as a part of their routine guidance and direction programs.

For Safer Driving

TOO much stress cannot be placed upon the qualifications for drivers of school busses. Daily throughout the country these gentlemen are entrusted with the safety of thousands of children, yet in only a few isolated instances are there any serious requirements with respect to mental and physical ability. School bus drivers should certainly possess at least the same qualifications as drivers of commercial transport busses. Their responsibility is even greater since children are a greater passenger risk.

Much of the school bus equipment is not only obsolete but positively dangerous to use. The state would hesitate to license some of these vehicles for commercial traffic yet fails to exercise its inspectorial power so far as the schools are concerned.

Despite the hazards attendant upon the daily transportation of children few busses are equipped with proper safety and emergency devices. Fire extinguishers are conspicuous for their absence and first aid safety kits are much too rare. The general program of safety education may well start with the school making a serious appraisal of its own transportation problems.

The Editor

Around the Clock in a 2A

On a clothes line stretching from house to garage, the young housewife hangs her washing. This is part of a home project developed in the Doyle School, Flint, Mich.

School Photographer

Classroom

By GEORGE A. STRACKE

PHOTOGRAPHS of projects and activities carried on in the classrooms of able teachers offer supervisors and administrators a convenient and simple means of amplifying the in-service training of teachers. They also have definite possibilities for adding to the teaching materials of teacher-training institutions.

In a public school system such photographs serve a dual purpose. They may be used during individual consultations with the supervisor or principal or—made up into lantern slides—may serve to stimulate discussions in faculty meetings or teacher-training groups arranged by the supervisor. Both methods are used in the public schools of Flint, Mich., the individual consultation, however, being the more common.

Photographs used for this purpose are made by the department of visual instruction on the request of the grade supervisor or the school principal. Only actual teaching situations and projects are photographed. The department photographer is a member of the school staff and is familiar with the teaching situations developed in the various projects. As many as fifty such photographs may be made in a single school year.

Use of photographs for teacher improvement arose from the increasing use of visual-sensory aids to instruc-

These children will be appreciative of the life and customs of the Japanese. The project is one developed at Lincoln School, Flint, Mich. Such photographs are used by supervisors and administrators as a part of their program for in-service training of teachers.

tion, particularly the classroom activity project. In the Flint schools, pictures are made for three purposes: (1) as a summary record of the project itself; (2) for central office records and public relations, and (3) as a teacher-training device for the assistance and stimulation of teachers. Taking of pictures also has served to encourage the individual teacher and to make her feel that official recognition has been extended the project developed in her room. At first, all projects were photographed; the current practice, however, is to photograph only those that show a distinct departure from preceding ones or are sufficiently outstanding to warrant their use for teacher-training purposes.

A copy of each photograph is furnished to the supervisor of the particular grade or subject in which the project was carried on. Principals frequently ask for copies also. These photographs are used by the supervisors in a number of ways. In a consultation with a teacher who is interested in developing an activity project, but who may be at a loss for a type or subject, the supervisor introduces photographs of a variety of projects suited to the grade taught by the consulting teacher.

Most of the pictures thus used are of the simpler and more easily developed projects. The teaching possibilities of each are outlined and after a selection has been made, the diary or daily record of activities made by the teacher who developed the selected project is brought into the discussion. With the photograph being used to aid the teacher in the visualization of the factors contained in the diary record, the development of the project is discussed in detail until a full understanding of its potentialities is obtained.

All teachers who use classroom projects make a daily diary or record of the learning situations and the success of the objectives, during the period the project is being developed. If the project is photographed, a copy of the record is filed with the supervisor.

A second use of these photographs is to stimulate the experienced teacher who has exhausted her own inventiveness. In this case pictures of the full range of projects may be brought into the consultation, for the reason that often a totally unrelated idea may stimulate an alert individual. If such a development does not follow, the teacher makes a selection. As before, the possibilities of the project for her grade are discussed and any necessary modifications worked out.

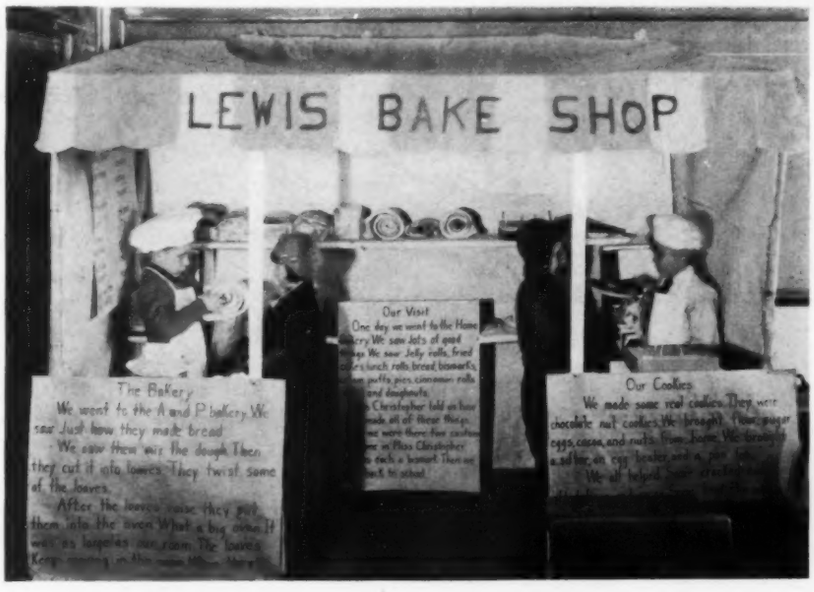
Indirect or subconscious stimulation is a third use made of the pictures. Most principals place photographs of projects made in their buildings on the bulletin board. With notable frequency teachers whose instructional practices have tended to become routinized realize that a sort of official recognition has been extended another's work and request permission or assistance in carrying on a similar activity.

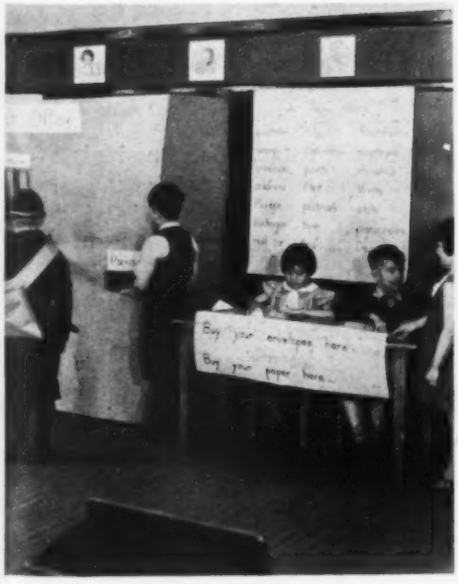
All pictures referred to thus far have been of specific projects and activities. However, photographs of another type are also used. The "around the clock" activities in the classrooms of several of the ablest teachers have been photographed at the suggestion of the supervisors. These pictures are used in sets for the assistance of teachers who request help in the planning of their daily programs.

The most recent development—one that is expected to become more extensively used—is that of making lantern slides from the photographs. This development, recommended by the department of visual education as a part of its teacher-training function, enables the supervisors to conduct discussions of particular projects with groups of teachers or principals. As

Materials assembled in social studies classes at Zimmerman Junior High School, Flint. After collecting and arranging such information as this, the children know many facts regarding their state.

Emerson Junior High School pupils are taught the importance of proper wrapping, weighing, addressing and mailing. At the foot of the page Kearsley School, Flint, approaches the study of government through the work of the post office. The bake shop teaches an appreciation of community services, meanwhile giving the children an opportunity to get some practical pointers on business.


LEWIS BAKE SHOP
Our Visit
The Bakery
We went to the A and P bakery. We saw just how they make bread.
We saw them mix the dough. Then they cut it into loaves. They twist some of the loaves.
After the loaves raise they put them into the oven. What a big oven. It was as hot as an oven from the loaves.
Our Cookies
We made some real cookies. They were chocolate nut cookies. We brought flour, sugar, eggs, cocoa, and nuts from home.



upon traditional curricular practices and the modifications that have taken place in the Flint public schools. The use of the classroom project as a visual aid to instruction has had a remarkable extension, perhaps because it lends itself most readily to being photographed and because its concrete results are easily shown by this means.

The spread of this teaching method forms an interesting commentary on the growth of teachers. At first, only a courageous, young teacher here and there turned aside from tradition and with the approval of the principal and supervisor set out on a project. The success of the single, isolated teacher in the building encouraged others. The method spread first in buildings and then to single rooms in other buildings until it has extended itself throughout the entire system.

All this has taken place without any particular pressure from the administration, as Flint school authorities believe that the only valid growth is that from within. No teacher has been required to take up new methods. In every case the teachers have asked the principals and supervisors for approval and assistance. Once they have tried a classroom project as a motivating force in their teaching, they rarely return to former methods.

The implications in the use of pictures for the amplification of teaching materials in teacher-training institutions are not within the scope of this article and are not discussed.

in the case of the individual consultations, the details and values of a project or activity are brought out. Of greater advantage, however, is the interplay of ideas and suggestions that the discussion arouses and the bringing into the common experience the experiences of individual teachers who have developed an identical activity.

As has been indicated, the pictures available for these purposes cover a range of activities and projects in all grades from the kindergarten to the twelfth grade and a considerable assortment within various grades, the greatest variety being in the elementary grades.

It has been interesting to observe the effect these methods have had

"Why should the public school be made the vestibule to the office, the department store and the factory? So pronounced is the emphasis on vocational training that some educators believe that a trade or skill is the only means of obtaining work, a false point of view."

The High School Fails

By GUSTAVE A. FEINGOLD

EDUCATION is generally regarded as the great magic cauldron into which all base elements of human nature may be thrown, to be transmuted into the highest types of wisdom, justice, nobleness and generosity. No matter how deep-seated and widespread the cancerous growths that afflict mankind, whether they are those of war, bigotry, race hatred, crime or murder, the universal expectation is that somehow they will be lessened and ultimately removed from the social organism through education. Those educators whose vision has not been blurred by predatory cant, however, must declare, even at the risk of being called pessimists, that the problem is not as easy as it sounds.

Education has been carried on by church and school for more than 2,000 years. At least the white race has been exposed to it for that length of time. Yet, this same race, or great portions of it, has fanned itself into furies of hatred, murder and war so frequently and so vehemently in the course of the centuries that what we call education appears to be quite helpless in the matter of improving human nature on a racial or national scale.

It has been the boast of certain educators that proportionately fewer criminals have been found among youths exposed to longer periods of education than among those with less schooling. The conclusion reached was that somehow public school instruction tends to lessen crime and criminal tendencies. This, of course, may be a far-fetched conclusion. At the time these figures were collected, public education, at least on the secondary school level, was greatly restricted to the economically and socially favored classes. As might be expected, the conditions prevailing among such people would be less conducive towards juvenile delinquency than in less privileged families. What was interpreted as cause, therefore, may have been nothing more than an attendant circumstance.

On the contrary, an outstanding proof that education by itself does not and apparently cannot appreciably soften the cruder aspects of human nature is to be found in the comparative ease with which the German nation was swayed to the primitive socio-political philosophy of Nazism. Here, certainly, was a superbly educated people. Here was a nation with less illiteracy than even in our own country. The standards of instruction in postwar Germany were extremely high, and the historic as well as humanistic knowledge of the common man was worthy of the renowned attainments of the German scientist and man of learning. Yet, it required but a bare decade of hunger and economic confusion to cause these reputedly educated people to turn back the hand of time and to revert to medievalism.

Let no one think, however, that these laurels are the peculiar property of foreign countries only. Several of

our own states are reaching out for them with imploring hands. During the past few years there have been two occasions at least when as many as 10,000 spectators were invited to witness public executions. According to the newspaper accounts, the crowds came from hundreds of miles around, parents brought their children and families made a holiday of the opportunity to witness human agony. Obviously, book learning and technical training alone are not enough to bring about a permanent improvement in the morals of mankind.

The real challenge in this respect is being faced by America today. More and more is secondary education reverting to mere vocational training. Some 60 per cent of the pupils enrolled in urban high schools regard the acquisition of certain manipulative and clerical skills as their main objective and the only reason for being in school at all. A large proportion of pupils, their parents and the public in general, regard the high school diploma as nothing more than a working certificate.

It was easy to boast of the achievements of public education when our schools were restricted to children who were more or less shielded from wrongdoing and encouraged to worthy attainments by favorable home conditions. But now, or especially since 1920, the school doors, secondary as well as primary, have been thrown open to all children, including those who live under the severest kind of social and economic strains.

The question arises, therefore, Can the schools *per se*, as they are now organized, exert enough influence in the lives of these children to counteract the everlasting urge toward delinquency which seems to be linked with neurosis and poverty more than with any other known factors? Certain it is that with 6,000,000 pupils enrolled in the public secondary schools, the problem of education is entirely different from what it was twenty-five years ago when only one-sixth of that number attended high school.

In the first place, the goals and objectives are deplorably devoid of humanism and unrelated to the apperceptive bases of the children who attend the secondary schools today. As educators, we are worshiping totems instead of gods. We bury the souls and minds of our youngsters in the débris of the bygone days, because of our uncertainty about the importance of the present day challenge. Except for the arts and sciences, every interest of public education on the secondary school level is directed either to the tombs of the buried past or to the busy market place of the present. The former statement applies especially to the fields of history and literature—those two great domains of human learning that are supposed to chart our future course and to mold the ideals and characters of our growing generations.

We reap as we sow. If our instruction in the high school is over the heads of our pupils, if it is alien to their social and cultural backgrounds, if it bears no relation to their realm of experience, it is like so much water rolling off a duck's back. Teachers become harsh and callous through the lack of response on the part of pupils; pupils become indifferent and rebellious through the lack of sympathetic understanding on the part of their teachers, and parents become irritable and dissatisfied with teachers and children alike, because of the collapse of their legitimate hopes in

"Let us not forget that public school education always will be at a disadvantage as compared with the educational advantages afforded in the private schools." The view at the right is of Cranbrook, private school near Detroit, where the teaching emphasis is cultural as well as practical.

the children's educational success.

With ill-becoming emphasis the charge is made that our high schools fail in their objectives because they do not teach our children how to think. Yet the fact is overlooked that if pupils are not given live issues to study, they really have nothing to think about. The thinking we want our people to do is not the syllogistic *quid erat demonstradum* type, characteristic of science and mathematics; but the kind that can build up a sense of justice, neighborliness and sweet reasonableness in the human soul and spread these over the land. Many of the traditional literary classics and customary history books have outlived their usefulness in this respect, it must be regretfully admitted.

The problem cannot be solved by merely throwing out the old and introducing the new. As a matter of fact, some of the new may be nothing less than thinly disguised propaganda of one kind or another, and in that respect destructive of life and ideals altogether.

In the second place, the high schools of today fail to take cognizance of the social, economic and cultural backgrounds of the pupils. They seem to be oblivious of the fact that 40 per cent of the high school children (in some localities, the proportion is larger) are of foreign extraction, and are kept conscious of that fact by the neighborhood in which they live, by the customs of their parents and the language used in their homes. It is not only pedagogically wrong, therefore, but it is cruel and inhuman to tear them away from their native and cultural origins, and to set up an artificial barrier between themselves and their ancestors.

Supplementing the Home

The barrier neither isolates the ancestors nor shelters the children. It simply adds to the disintegration of their characters. This disintegrating process is going on rapidly enough as it is among children of foreign extraction.

Let us not forget that public school education always will be at a disadvantage as compared with the educational opportunities afforded in private schools. The purpose of a general education is to round out the personality, to fortify youth with a set of ideals and standards of conduct, to make him so firm and strong in his conviction of what is right and just and honorable that nothing will shake him when he embarks on the stormy sea of life. For this sort of development, the child must be sheltered during his formative years from the insidious inroads of cynicism engendered by poverty and injustice, which he either experiences or observes about him. He must be sheltered from the grasping spirit in which he moves, as is so often true of the children who spend only a fraction of the day in the halls of our public schools and the major portion of it in the maelstrom of the street. Ships are not built on mid-ocean where building and builder are exposed to the perils of the sea in the process of construction. Ships are built in dry dock, and are not launched until they are strong and secure in all their parts. Why should we be less considerate in the building of human beings? We should like to stem the floods of crime and wrong-doing, but we shall never succeed as long as we try to repair the broken dikes of our social system with disintegrated personalities.

If we are to achieve social regeneration through education, then the emphasis must be away from the market place. Doctor Feingold tells four ways in which the high school may adapt itself to the demands of the times.

By pointing out these difficulties confronting teacher and pupil alike in the public high school, I do not mean to imply that our only salvation lies in the private school. What I do wish to emphasize is the fact that the task of social regeneration through public education is not as simple as the Pollyanna educators make it sound.

Most juvenile delinquency can be traced either to a broken home or an unhappy home. Although the schools cannot be of immediate help in the former case, it is their duty to be of the utmost help in the latter. It is gratifying to find that we Americans still believe in the family as the unit of society. That being the case, the primary duty of public education is to preserve and increase the importance of the family, not to glorify either the state or the individual. Our educational philosophy, therefore, should be centered around the unit theme of building up happy, harmonious home lives with the family as the starting point.

Let's Draw on Foreign Cultures

Not always have our efforts been directed toward this goal. For years we have been gathering statistics about the home conditions of our school children, such as the birthplace of their parents and the languages spoken in their homes. But foreign-born parents and foreign languages in the home were considered as tragic and a liability to the child. It never occurred to us educators to take advantage of this richly variegated background by introducing into our secondary schools foreign languages, histories and literature dealing with the origins and cultural stations of these children and their parents. Perhaps we were restrained by the fear that to do so would retard their Americanization, and so we have been teaching them French when we should have taught them Italian; and we are still teaching them Spanish when we might teach them Russian or Polish with equal justification. Thus, we find, for instance, that although the number of Spanish speaking people in America is only 168,000, Spanish is being offered to more than a quarter of a million children; while with more than 2,000,000 foreign-born Italians in America, it is only within the last three or four years that a few progressive communities have begun to offer Italian as a foreign language study in secondary schools.

Is this overemphasis of the one language and the utter neglect of the other due to the greater richness of Spanish literature as compared with Italian? Hardly! The sole reason is to be found in the real or imaginary commercial value of Spanish, and that is precisely where the trouble with our secondary education lies. Everything in the curriculum, with the possible exception of the

college preparatory course, is directed toward the market place.

Still more inexcusable is our indifference to international literature which can be secured in excellent translation. With some urban high schools containing large numbers of children representing many different nationalities, there is no reason why translations of foreign literary masterpieces should not be read and studied. Ours could be made the most cultured country in the world.

In its present form the high school curriculum is too particularistic, emphasizing too much the vocational interest in society. The public has been led to believe that training and the acquisition of manipulative skills are synonymous with education. A curriculum based on this philosophy tends to develop a narrow-minded, selfish citizen and may be responsible not only for his yearning for the free and easy life but for his lack of interest in social problems altogether. Even that part of the high school curriculum that deals with the so-called humanities frequently makes use of material glorifying the socially less desirable human traits, such as "rugged individualism" and the acquisitive and combative instincts.

Why should the public high school be made the vestibule to the factory, the office and the department store? So pronounced is the emphasis on vocational training that some educators have developed the utterly false hypothesis that the acquisition of a trade or skill, like stenography or bookkeeping, is the only means of obtaining employment. Some even boast about the large number of their graduates who obtain office jobs. Yet the fact is that employment, as we have so sadly learned during the last six years, depends primarily on industrial needs. What if the 500,000 commercially trained boys and girls who are graduated from high school each year were devoid of this specific training? Would all of them remain unemployed?

Our national framework is so constituted that the materials of high school instruction must be designed to promote a greater degree of social sensitivity among our future citizens. Everything we offer in the high school curriculum should be related to the greatest of all objectives—the ennoblement and the sanctification of human life.

"Except for the arts and sciences every interest of the public secondary school today is directed either toward the tombs of the buried past or toward the busy market place of the present."

It is tragic that for all the effort, labor and energy we put forth in our educational endeavors, we have so little of real spiritual value to show. Outside of physical improvements there is really slight advancement that education can boast. True, we have better homes, more comfortable clothing, more wholesome foods, better means of transportation and communication, better police and fire protection, and better sanitation and medical treatment.

Are we enjoying these exceptional advantages in a sensible, rational and equitable proportion? Or better still, are we always making use of these material assets in a manner calculated to increase the spiritual and intellectual contentment of our people to a corresponding degree? Let something occur that interferes with the possession of these outer garments of civilization by a large number of people, and immediately society is plunged into a state of primitive existence.

It would seem that the demands of the times, which point to the expansion of human thought and relationships, rather than to a reversion to outmoded patterns of life, would require the following main adaptations in secondary education:

1. That the materials of instruction be selected on the basis of social sensitivity.
2. That the curriculum be adapted to the social and cultural backgrounds of the pupils.
3. That the American framework, as embraced by our conception of democracy and social responsibility, be made to dominate the school curriculum, not only by reference to American traditions but by inclusion of promising American aspirations.
4. That if the school is to supplement the home, it must do so on a twenty-four, not a six-hour schedule, and it must embrace the entire family and not the child exclusively.

Transfer to Junior High

All 6A pupils are invited to the high school on a Saturday morning for a special program and for inspection of the building.

By CHARLES E. LEAVITT

IN ORDER to supplant a fear of the unknown with a desire to enter the new school, an orientation program was instituted in Grosse Pointe, Mich., in 1932, as a definite part of our guidance plan.

The orientation problems of 7B pupils seem to be of two types: (1) becoming a social being in a new society and (2) academic achievement. These classifications overlap to such an extent that we cannot isolate either when we attempt to aid the pupil with his new problems arising with the transfer from elementary work to junior high school work.

Some methods by which we attempt to help 7B pupils make a natural and pleasant transfer are employed before they leave the elementary school.

Each pupil receives the high school weekly paper, "The Tower," during the 6A semester.

Representative 6A pupils from each elementary school spend a full day at the high school, each with some 7B pupil, and report back to their classmates.

A representative high school pupil visits each 6A homeroom to welcome the prospective 7B's to high school and to answer questions.

All 6A pupils are invited to come to the high school building on a Saturday morning for a program and inspection of the building in groups. This is under the direction of the High School Student Association.

Teachers of 6A pupils provide the high school with a guidance record for each pupil to assist the staff in classifying entering 7B pupils properly and to help meet any special adjustment problems. A summary of the elementary school record is sent to the high school for each 6A pupil.

The high school principal and elementary school principals meet together twice each month, when mutual problems are talked over.

At the opening of the 7B semester special faculty members and service club pupils are selected and given the job of assisting new pupils to locate their homerooms, classrooms and lockers during the first few days of the semester.

In the homeroom on the first day pupils receive their program cards all prepared for them and are given special directions as to what they are expected to do and where they are expected to go.

Homeroom groups are smaller than in the lower grades. Each pupil is given a printed handbook with information about the school. Homeroom discussions and demonstrations are provided to acquaint pupils with school facilities and traditions, such as the proper selection and the cost of lunches in the school cafeteria; the provisions of the school health service; library facilities and how to use them, and a discussion of the service club, its place in the school and how to become a member.

Representative 6A pupils from each elementary school spend a full day at the high school, each with some 7B pupil, and report their visits to their classmates.

Other adjustment activities used with success include the following: (1) sectioning by ability; (2) study and reporting back to the elementary school principal of 7B marks at the end of the first marking period; (3) elementary-high school joint teacher conferences and committees on course of study, and (4) interchange of elementary and junior high teachers.

The Retarded Teacher

By LAURENCE R. CAMPBELL

Seldom do young teachers have any attention that might be termed guidance. What the teacher is supposed to do for his pupils, the principal should attempt to do for his teachers. Problem teachers are first retarded teachers.

FORMIDABLE indeed are problem children; more formidable are problem teachers. Rare is the school undisturbed by teachers with inferiority complexes or escape mechanisms, intellectual infantilism or emotional immaturity.

We do something about problem children, retarded pupils, unadjusted boys and girls. We don't tell them to take a walk; we give them a new deal. Guidance techniques, curriculums and measuring devices are streamlined to meet their needs insofar as the community resources permit.

The forgotten problem teacher is the wallflower in our modern educative process. Even his best friends won't tell him what's wrong until it's too late. Principals give him all the rope he needs—to hang himself. No one helps him until he can no longer help himself. Finally he is ploughed under.

Utopia may have no retarded teachers, but American schools are not so fortunate. Young men and women entering the teaching profession may or may not have the abilities to teach successfully; they may or may not have adequate training when they start; they may or may not keep up with educational development. Seldom do they as young teachers have any attention that might honestly be dignified by the descriptive term "guidance."

Catch-as-Catch-Can System

There are so-called policies of teacher counseling. In the catch-as-catch-can system the principal gets a hunch, takes a notion or feels in the mood to chat with a member of the staff, but is too "kind" to give any definite suggestions if the teacher's work is not satisfactory. Now and then he may poke his head into a classroom, but in the more modern schools he may sit in his office, tune in on a lesson and then eavesdrop.

The efficiency expert prefers the new check-and-double-check system, which requires stop watches, multicolored graphs and play-by-play reports to file away in the office. By computing various ratios, probable errors and sigmas—all bound in red tape—the administrator can discover the effectiveness of each teacher. Thus a popular design for guidance begins to resemble a collection of chemical formulas.

What happens at the time of the show-down or the purge? Is the principal held accountable for what he terms the failure of a teacher? The final verdict may be based upon subjective or objective evidence, but it is the teacher who is put on the spot and then taken for a ride.

What the teacher is supposed to do for his pupils the principal should attempt to do for his teachers. That does not mean that he will use the same techniques, but it does mean that he will apply the same philosophic and psychologic principles in contacts observed in the classroom.

Human Relations Come First

If our American schools are to provide the environment and experiences from which boys and girls may emerge with integrated and socialized personalities, ready to live happily and effectively in our dynamic society, we certainly cannot afford to tolerate a hit-and-miss, trial-and-error kind of teacher guidance. Teacher misplacement is too costly financially and educationally. Retarded teachers become problem teachers.

Consequently it would seem fair to suppose that the superintendent, principal or personnel director should first of all be a counselor. He may be an expert on office routine, plant management, school finance, public relations and statistical research, but his paramount interest must be to see that the human relations in his school are such that the aims of education can be achieved. The interaction of teacher and pupils is educative only when retarded teachers and pupils both are helped to adjust themselves.

Acceptance of such a point of view means that principles of psychology and mental hygiene will be applied in all human relations in the school system, not merely the pupil experiences.

Teachers obviously become problem teachers either because of conditions in the school or out of the school. With the former the principal may have much to do, and with the latter he may also have much to do indirectly. His success will depend upon mastery of principles and techniques which he expects teachers to apply successfully.

Where Failure Begins

The terms "retarded teacher" and "problem teacher" cannot be used interchangeably, for the same adjectives when used to describe pupils are by no means synonymous. The retarded teacher fails to keep up with the procession, whereas the problem teacher is going in a different direction. They are both mentioned here because a problem teacher is usually a retarded teacher first.

It takes no master mind to discover many causes of retardation. It is commonly assumed that once a teacher has been given some kind of certificate or credential she can teach

any course or handle any activity within range of the document.

The subject assigned the teacher makes a great difference to him and to the pupil, although it may not worry the principal. History teachers in English, English teachers in mathematics and science teachers in foreign languages cannot be expected to develop confidence in themselves through successful teaching, because they are not adequately prepared to teach such courses effectiveiy. Frequently in the same school there may be social science teachers in physical science classes and physical science teachers in social science classes. Such a situation is hard on the teacher and worse on the pupils.

Occasionally it is necessary for a teacher to teach a course or sponsor an activity for which he is inadequately prepared. What's to be done? Some teachers think they should fumble and grope until their complaints bring a shift. Instead they should arrange to study during a summer session, at an evening school or by correspondence the subject matter they need to master. Those who have been willing to invade new areas of thought and knowledge have often found they preferred to conquer the new worlds rather than remain in the green pastures once enjoyed.

Naturally the school cannot hold back merely because certain teachers do not care to teach fusion courses, integrated courses or specialized courses. The English teacher who prefers to teach the same English may not realize her new opportunities when these courses are differentiated to fit the needs of different interest and ability groups. It is the principal's task to handle this case in a way that neither the educational program of the school nor the teacher will suffer.

If teachers and their pupils are not congenial, there's usually a reason. The miniature Mussolini who believes in "discipline" is out of place in any American classroom, for he who inspires fear rather than respect may teach facts but not citizenship. On the other hand many an easy-going young teacher who is a push-over at first can develop enough backbone to be both popular and successful in the second year.

Teachers who become barkers, sloganeers, cheer leaders and propagandists should have academic freedom as well as all teachers in a democracy, but they must learn that they are not in the classroom to indoctrinate pupils but to train them to think objectively. Certainly they should differentiate definitely between personal convictions and scientific conclusions. Otherwise a rash and outspoken teacher, however sincere, may become as good a watch dog as a mad dog.

Occasionally ignorance of policies on teaching loads, salary scales, administrative routine or room assignments may cause needless friction and unhappiness. When matters beyond the control of the teacher are explained they neither irk nor irritate the teacher enough to interfere with his effectiveness. It is the principal's business to see that his staff is properly informed on policies.

The successful teacher who suddenly considers himself indispensable, who gets delusions of grandeur, who believes that the school revolves about the department or activity in which he is firmly entrenched is truly a problem. He often bullies other teachers, usurps the principal's authority and disregards rules that others observe. It is decidedly unfair to the teaching staff and to the pupils to allow any member of the faculty to set up within the school an independent principality operated on a different basis. Consequently the principal should adjust matters wisely, even cracking down directly if more subtle measures will not work.

Occasionally, too, there are teachers who chisel and fudge, who apple-polish and backbite, who pull wires and work angles, who alibi and muscle in. There are women who fall back upon feminine tactics and men who beg off because of friendship.

Teachers who fall out of step because of nonschool situations usually are more difficult to handle because the principal must act without appearing to act. Of course, it is true that he can't do much when teachers' wives gossip too much or when unmarried teachers fall in or out of love, but he can be aware of the situation and be sympathetic.

Behavior Problems and Crime

By HARRY J. BAKER

INASMUCH as the age of criminals has moved downward to an average of about nineteen or twenty years, it is believed that more intensive study can be made of crime while children are yet in school. The overwhelming costs of crime make it imperative that education do its part in crime prevention. We must rid ourselves of the biases against problem children and study their problems as natural results of certain factors in themselves and their environments.

Children's behavior is largely influenced by their feelings and emotions rather than by the intellectual activities that we cultivate in school. Young children reach emotional conflicts over the goal of self-satisfactions *versus* the goal of social service.

In a more specific way behavior causations may be grouped thus:

1. Physical and health factors, such as vision, size, motor control and general health. Any condition that limits the child's ability to express himself and to compete normally with other children brings about thwartings of the emotional life.
2. The personal habits and recreational factors of the child as developed in his home are directly related to his attitude and behavior at school.
3. Personality, social and emotional factors which deal with anger, fear, pity, interests and initiative.
4. The parental and physical factors of the home are represented by the parents' intelligence, education, age, health, personality, occupation and economic status. We must learn to take inventory of the best features of the poorest environments and capitalize them in salvaging behavior problem children.

New Laws Touching Teachers

By M. M. CHAMBERS

THE legislative year 1937 is marked by the enactment of new retirement acts covering teachers and other school employees in several states. The trend of salary legislation is upward, and the teachers' oath hysteria of 1935 has ebbed. Considerable attention is given to the county superintendency, no less than seven states having taken steps to improve the qualifications, tenure or salaries in that office.

Oregon made several changes in certification. One act sets up special certificates, to be issued by the superintendent of public instruction, for teachers of atypical children. Another act requires supervised teaching and four term hours in Oregon history, Oregon school law and the Oregon system of education at a standard college or normal school as prerequisite to elementary or high school certificates. Still another provides for the issuance of school administrators' credentials under rules adopted by the state board of education.

Oregon also revamped the certification of high school teachers in such a way as to advance the minimum training requirement to reach one year beyond the bachelor's degree after Jan. 1, 1943. There are a one-year certificate and a five-year certificate, the latter being renewable and amounting in effect to a life certificate for those who continue to teach. Teachers who drop out of the profession and then return must take an additional term of training in order to obtain renewals.

Kansas amended the statutes in such a way that certificates formerly issued by the county superintendents are issued by the state board of education after July 1, 1937. The state board furnishes questions and designates the places for annual examinations, but the papers are graded by the local county board and forwarded to the state department of education, where certificates are issued. No change was made regarding the certificates that the state teachers' colleges have been authorized to issue for several years, nor in the state normal training certificate law.

Nebraska made a complete revision of the certification laws, to become effective in September, 1938. All certificates will be issued by the state superintendent of public instruction. The normal training certificate will be retained, but all others will be redefined and reclassified. A certificate for administrators is established. Current life certificates will remain valid, and all current certificates will be renewable once after September, 1938.

From East to West, from North to South, 1937 legislative sessions have enacted statutes for the betterment of conditions in education; salary trends are upward and provisions are being made for more reasonable retirements.

Wisconsin required that all elementary teachers must have at least two years of professional training beyond high school by 1939. New York required district superintendents to qualify for a superintendent's certificate. In addition to graduation from an approved college, applicants must have completed thirty semester hours in approved graduate courses and have completed five years of teaching or supervision in public schools. Certificates expire whenever the holder has not been employed on the professional staff of the public schools of the state for a period of five consecutive years.

Wisconsin enacted a tenure law, effective Aug. 1, 1937, providing indefinite tenure for all teachers after a five-year probationary period. Teachers who already have served five or more years in one school district acquire tenure rights without further probationary service. New York extended opportunity for indefinite tenure to teachers employed in districts having a population of 4,500 or more and employing a superintendent of schools, under certain circumstances. The probationary period prerequisite to acquiring permanent status is three years for all except those who have been employed by the district for not less than three years prior to July 1, 1937. For these the board of education may at its option prescribe a probationary period of one year.

Another act provides that no person in public employment, including school employees, who is an honorably discharged veteran of wartime service, shall be removed except for incompetency or misconduct proved at a formal hearing.

Pennsylvania passed a so-called tenure act which was approved by the governor on April 6 and became effective at once. It is really a continuing contract law, setting forth a standard contract form and requiring its use by all school boards, and specifying that such contract shall continue in force automatically from year to year unless terminated sixty days before the end of the school term, either by resignation of the teacher or by action of the board of education. In the latter event the teacher is entitled to a hearing on the reasons for the termination of his contract, if he requests it in writing within ten days.

The right to change the salary is reserved to the school board, but the only causes for which it may terminate the contract are immorality, incompetency, intemperance, cruelty, wilful and persistent negligence, mental derangement, wilful and persistent violation of the school laws, or sub-

stantial decrease in the number of pupils owing to natural causes.

When the last-named cause operates, the board may suspend the necessary number of employees, but only in inverse order of their employment. While there are suspended employees available, no new appointments may be made, and when an increase in the number of pupils justifies it, the suspended employees must be reinstated in inverse order of their suspension.

Minnesota enacted a continuing contract law, similar to statutes now in force in Montana, Nevada and Delaware. It makes a teacher's contract remain in force from year to year unless terminated by a majority vote of the school board or by resignation of the teacher before April 1. It applies to all professional employees required to hold certificates from the state department of education, including administrators as well as teachers. It does not apply to the cities of Minneapolis, St. Paul and Duluth, because they already have provisions for permanent tenure after a three-year probationary period.

Nebraska enacted a continuing contract law applicable to all teachers and administrators in city and most town schools, effective Aug. 13, 1937. Contracts will be automatically renewed unless the employing school board by April 1 either offers a new contract or votes to terminate the services of the employee.

Makes Retirement Compulsory

Arkansas enacted a retirement law covering all certificated school employees. For new appointees the system is compulsory, but those now in service are allowed one year in which to elect whether or not to participate. Retirement will be voluntary at age sixty or after twenty-five years of service. No compulsory retirement age is fixed. This is at the discretion of the employing boards. The teachers' contribution will be 4 per cent of their salaries, and will be matched by an equal sum paid out of the state common school fund. Contributions will begin on Dec. 1, 1938.

The system will be administered by a board of seven members, including the state bank commissioner, the state insurance commissioner, the state treasurer, the commissioner of education and three teachers elected by the Arkansas Education Association.

Pursuant to a permissive constitutional amendment adopted in November, 1936, Texas enacted a teachers' retirement law effective July 1, 1937. All teachers and administrators in public schools and state institutions are automatically included, but those now in service may be individually excluded at their option by filing notification within ninety days after Sept. 1, 1937. Retirement after twenty years' service is optional at age sixty and compulsory at age seventy unless the employing board permits an extension. There is also provision for disability retirement.

The state will contribute sums equal to the annual contributions of the members of the system, which will be deducted from their salaries. The board of trustees will consist of three teachers elected from the membership, the state life insurance commissioner, the chairman of the state board of control and a sixth member to be selected by the state board of education.

Specifies Annual Income

Washington enacted a state teachers' retirement law of modern type, full details of which are not available as this article is written. Indiana enacted a new retirement act providing $960 a year after a straight thirty-five-year term of service, which permits retirement below the age of sixty in many cases. Retirement after twenty years of service, on actuarially proportionate income, also is permitted. Nonteaching school employees who are qualified teachers (such as school librarians) are included. The law requires that there must be at least two teachers on the retirement board.

Utah repealed an unsatisfactory teacher retirement law and adopted a new statewide act providing for compulsory retirement at age seventy or optional retirement at sixty or thereafter. The teachers' contribution is 6 per cent of their annual salaries. Nevada revised the teachers' pension act, materially increasing the teachers' contributions, and raising the state's contribution from ½ cent to 1½ cents on each $100 of valuation.

Maryland authorized bond issues of $600,000 for the retirement system in each of the years 1938 and 1939, and provided for the participation of the faculty and employees of the University of Maryland, directing that financial provision for this be made in the university budget. Wisconsin made compulsory the retirement of faculty members of the state teachers' colleges at the end of the fiscal year in which the seventieth birthday occurs, and automatically retired all those already seventy or more on June 30, 1937.

Revises Teachers' Fund Laws

Michigan revised the teachers' retirement fund law and made an annual appropriation of $325,000 to match teacher contributions to the fund. California passed an act authorizing local school districts whose employees are not already under a local retirement system to establish such systems when approved by a majority of the electors voting at an election. The question may be submitted by the school board on its own initiative and must be submitted if 10 per cent of the electors of the district petition for it. This act is a sequel to a 1935 measure permitting school boards to discharge teachers at the age of sixty-five years, which became effective September, 1937.

Kansas authorized school districts consisting in part or wholly of cities of the second class with population of 5,000 or more to provide cooperatively with their employees a retirement benefit plan. Massachusetts passed an act allowing retirement credit, under certain conditions, for not more than ten years of service as a teacher in the public schools of other states. Delaware directed the governor to appoint a commission of five members to study teacher retirement and report prior to the 1939 legislative session. The only appropriation for this study was $500 for expenses of members of the commission. Oregon set up a committee of one senator and two representatives to study plans for a teachers' retirement fund and recommend legislation.

In Maryland the absence of any new legislation affecting teachers' salaries means that on Aug. 31, 1937, the salaries temporarily reduced in 1933 and 1935 return to the pre-depression status. Provision for the restoration of salary cuts and incre-

ments for teachers was made in this year's state budget. New York repealed an earlier statute that had authorized temporary salary deductions for certain teachers in New York City.

California enacted a minimum salary law specifying $1,320 as the lowest lawful annual pay for a certificated public school employee. There is no exception to this minimum, but when a district's total income from all sources is less than $1,550, the county superintendent may allot to it from the unapportioned county elementary school fund a sum not to exceed $80 enabling it to comply with the minimum salary law. Wisconsin raised the minimum salary for elementary teachers to $80 per month for the school year 1938-39, and $85 per month for the school year 1939-40 and thereafter.

Washington provided that no school board shall contract to pay a teacher an annual salary of less than $1,200, unless the estimated revenue from the maximum tax levies permitted without a vote of the people is insufficient to pay such a salary, in which case the board must pay whatever portion of $1,200 is produced by 70 per cent of the total estimated revenue. The attorney general is of the opinion that if a teacher voluntarily occupies a teachers' residence maintained by the school district, a reasonable annual rent may be counted as part of the minimum salary.

In Massachusetts a bill to repeal the notorious teachers' oath act of 1935 was passed by the legislature but vetoed by the governor. Congress repealed the ignominious "red rider" which had been attached to an appropriation act for the District of Columbia in 1935, and which required every teacher in the public schools to swear that he had neither taught nor advocated communism before the delivery of each monthly salary check.

South Dakota made the regulation of the state board of health requiring each teacher annually to obtain a certificate evidencing freedom from active tuberculosis enforceable only at the discretion of the authorities of public and parochial schools, and directed these authorities to pay for the necessary tests out of current school funds if they require such tests to be taken as a teaching prerequisite.

Maryland limited the registration fee that may be charged by teachers' employment agencies to $2. Washington prohibited and penalized the requesting or transmitting of information concerning the religious affiliation of any applicant for employment as a teacher or school employee. This statute is similar to one enacted in New York in 1932.

Idaho stipulated that in the future candidates for county superintendent of schools must hold a superintendent's and supervisor's certificate, or have served as county superintendent between 1929 and May 7, 1937. Oregon specified that candidates for county superintendent must have had twelve months' experience in public educational work within the three years immediately preceding the election.

West Virginia provided for the election of county superintendents by the county boards of education on the first Monday in July for terms of not more than four years. Applicants must have a bachelor's degree and at least twelve hours' credit in administration and supervision, and at least five years' experience teaching or supervising in West Virginia, as well as a health certificate on a form prescribed by the state superintendent.

The prior statute making county superintendents removable by the county board "for cause in its judgment and discretion" was amended to read "for immorality, incompetency, insubordination, intemperance or wilful neglect of duty," the charges to be written and hearing granted after ten days' notice.

Washington fixed the salaries of county superintendents in the ten classes of counties, at $900 for the lowest class and $3,800 for the highest. In the next lowest and the next highest classes of counties the salaries are respectively $1,800 and $3,000. Kansas restored the provisions relating to salaries of county superintendents as of 1931.

South Dakota provided for nonpartisan nomination and election of the state and county superintendents in accordance with constitutional amendments ratified at the general election in 1936. The procedure is similar to that already used for the selection of judges, and the names of judicial and educational candidates will appear on the same nonpartisan ballot. Arkansas retained its unique "county examiners" in lieu of the office of county superintendent, but placed them on a full-time basis at salaries ranging all the way from $1,200 to $2,400.

For Adults and Adolescents Both

THE need for secondary education is not limited to those pupils who have been promoted in regular courses from the elementary school. Boys and girls who have left school before they were adequately prepared to find a place in the economic world must still be the concern of the secondary school if it is to approach any complete fulfillment of its educational function. Men and women who may have established themselves successfully from the economic standpoint, but who seek either to prepare for occupations more fully in accord with their capacities or to supply their lack of broad general education, are likewise the school's concern.

The secondary school has no inconsiderable part to play in the rapidly developing program of adult education. The further schooling of mature men and women will need to be organized and conducted separately from that of immature boys and girls. For adults and adolescents both, however, the secondary school should eventually make definite provision. If to do so immediately means jeopardizing the interests of those boys and girls who have been progressing regularly through school, the interests of the latter should first be respected. Under such circumstances its educational service should be extended as rapidly as possible to all to whom further secondary education will be individually and at the same time socially profitable.—From *Issues of Secondary Education,* Department of Secondary School Principals, National Education Association.

Wanted: Social Misfits

By WILLIAM YALE

TO US of the twentieth century who are beginning to grasp the implications of our most recent psychologic knowledge, it is becoming evident that as yet we have not adapted our educational methods and practice to our newly acquired knowledge. Today teachers and educators know that nature creates in each succeeding generation a small privileged group of superior individuals.

Our American educational system has been so designed as to provide an opportunity for such individuals from any and every class with the expectation that in so doing leaders would be trained who would prove the mainstay of democracy. But there were two forces at work in the American educational system which have and still are frustrating this bright hope of the nineteenth century educators. Both of these forces have their roots deep in the history of Europe.

Education Bolsters State

One is the idea that a state educational system has as one of its principal functions the support of the state and the maintenance of those political beliefs and dogmas upon which its authority rests. This idea, which can be traced back directly to Prussia and the Prussian school system, was transplanted to the United States where it has flourished. Here it led to a blind devotion to the machinery of political democracy by the masses trained in the public schools and to a vocal lip service to the principles of democracy by the privileged few who are sufficiently intelligent to understand that such machinery is a means by which the masses can be most effectively led.

This idea has resulted in a failure in our schools to encourage an active critical attitude toward our political institutions by which alone political democracy might have been kept modern and vital by constant revision to keep step with our rapidly changing social and economic order.

The other idea has evolved from the extraordinary emphasis placed upon the individual by the Humanist Movement and later by Protestantism. The insistence upon the belief that the salvation of the individual, moral, social and economic, lies largely within himself has resulted in a failure to understand that the masses are in the main largely the victims of the society into which they are born. Nor has it been realized that as our social-economic order has grown in complexity, the masses have become ever more and more dependent upon those who controlled the world in which they lived.

Fail to Stress Responsibility

In failing to grasp the significance of this tendency in the modern world, our educational thinkers did not understand the dangers inherent in their system of pupil motivation. Placing an exaggerated emphasis on individual success, they failed almost entirely to inculcate a sense of true social responsibility in the privileged few who inevitably availed themselves of the new educational facilities to prepare themselves to become the masters of those masses whose labor produces the surplus wealth that makes such facilities possible.

For more than half a century our school system has been training and equipping the privileged few so as to make their rise to power more certain and more rapid. This would be admirable if these superior individuals had been socially motivated.

Unfortunately for American democracy and the majority of the American people, instead of teaching this superior group the compelling necessity of using their nature given privileges for social purposes lest our modern society collapse, our educational system has been urging upon them the powerful incentive of personal power, wealth and fame buttressed by the comforting philosophy of Calvin, which has until recently provided the moral justification for the great material rewards they obtained at the expense of those less privileged than themselves.

The effect of this educational system, which has been so vociferously acclaimed as the perfect expression of democracy providing equal educational opportunities for all, has been that of preparing and equipping a privileged few to use their real and superior native equipment to exploit more successfully for their own personal aggrandizement the less privileged. In consequence, we are faced with a dangerous crisis in the field of education.

If we as teachers are now unable to develop methods of training youth to be socially minded, we are in grave danger of seeing our society pass completely into the hands of exploiters and racketeers who may totally wreck it in their greed.

What Misfits Can Do

In discussing this problem of the schools, Hart says that if our schools did motivate youth socially, such youth would be unfitted for our present society. The only reply to that is that the more superior students we can turn out as unfitted for such a society the sooner can we hope to have a more democratic, a more honest and a more decent society. The minute a teacher realizes that our society is unfitted for a socially minded youth, he becomes a hypocrite and an exploiter if his teaching is directed toward making youth fit for such a society.

The educational world can no longer rest supinely upon the superb achievements of our illustrious predecessors, but as teachers and educators we must issue a clarion call for the creation of a new type of education which is not only democratic but profoundly social in character, motivation and in ultimate purpose.

Graduates With Experience

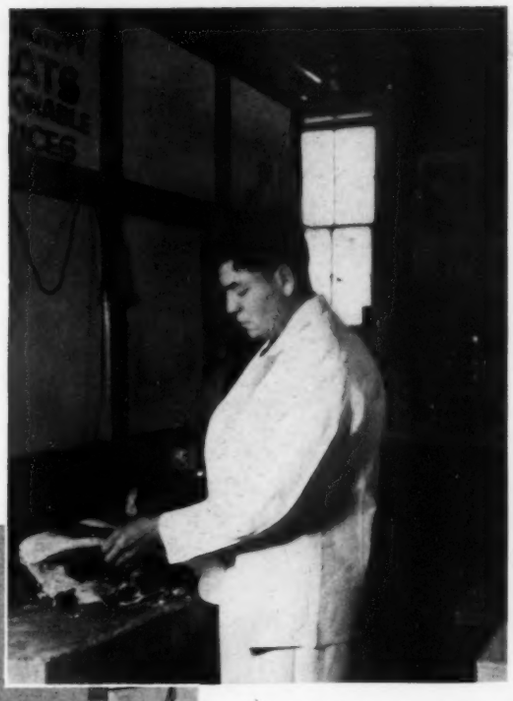
By L. A. BARRETT

IN A small school in a small community—Salida has a population of about 5,000 persons and graduates about 70 pupils annually—less than one-third of our graduates go to college. Fully two-thirds of these young people finish school each year with little or no practical experience and with little save the desire to get a job.

With the one thought in mind that the duty of the school should be to aid the two-thirds who are not going to college, as well as the one-third who presumably will, Salida schools have been carrying on an experiment in community vocational education. This experiment, while it still has its faults and defects, nevertheless does promise to be of great aid to at least a part of the group that is not going further with its formal education than a high school diploma. In brief the Salida plan is this:

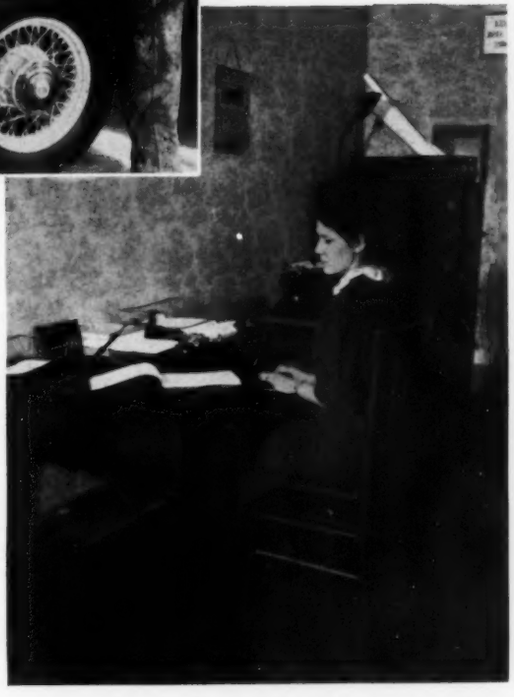
At the middle of the senior year, those pupils who wish to enter upon the cooperative program for the rest of the year are called together and are asked what line of work they hope to pursue when they are graduated. No one who plans to attend college is included nor are the hopelessly poor pupils considered in this group. One-third of the last two senior classes have begun the plan.

These pupils continue their regular class work for the morning hours, but are excused from regular classes during the afternoons. They meet with a coordinator—one of the industrial arts men, who is released from half of his teaching load—and talk over with him their likes and dislikes, their hopes and wishes. He finds the type



This pupil is being taught to be a meat cutter. He works three hours a day in a butcher shop to get experience.

Typical scene on the job in which an experienced mechanic is showing the pupil how to do some kind of repair work on motors.



This girl is getting practical experience in the Salida Credit Men's Association office as a secretary and a stenographer.

Twenty seniors in the Salida High School meet daily with a coordinator (left) and talk over common problems before they go to their afternoon jobs.

of work that each senior wishes to do when through school.

The coordinator then interviews representatives of these lines of work, trade or industry to see if they will be responsible for taking in a senior who will work three hours a day entirely without recompense or wages of any sort in exchange for his labor, if the employer will teach him the practical things that he needs to know in order to make him an employable person upon graduation.

Our community has entered wholeheartedly into the plan. Last year fifteen and this year twenty of our seniors were placed in meat markets, filling stations, print shops, greenhouses, ladies' ready-to-wear shops and insurance offices. All are proving satisfactory so far as the school can find out.

As an example of the training procedure, suppose a boy is sent to a hardware store for his training. During the eighteen weeks' period that he is in the store three hours a day, the "boss" teaches the boy to know nail sizes, which kind of saws are best for various jobs, how stoves are set up, how to display merchandise. He is told which drills and bits are best for special jobs, whether wire is sold by the foot or the pound, what size shells fit which guns, what kind of fishing tackle to sell to an indecisive angler.

These workers meet daily with their coordinator during the eighteen weeks and together they study common problems, such as meeting and selling things to the public, the value of personal appearance, practical psychology and the fundamentals of retailing and wholesaling. They study factual material that their employers send for them to read. The coordinator also visits the employers to see if they can suggest some things that the school might do to make their workers more efficient.

In a small community most of the workers in any store or shop need to know a variety of things. For example, a bookkeeper in a grocery store will spend only a short time daily on debits and credits, hence he must know whether prunes sell by the peck or by the pound. He must be willing and able to wait on the trade, must take orders over the telephone, must know how to make change, and a thousand other things that a full-time bookkeeper would not need. Thus the job of the coordinator is one of trying to find out how many different kinds or classes of work a beginner must know in order to be of value to an employer in a particular field.

Fifty per cent of our group of workers who tried this experiment last year were given jobs as soon as school was out and are still working in the jobs in which they were placed a year ago. Another 30 per cent were found to be able to get employment in lines closely related to the fields in which they had their training, unquestionably because of that experience.

The plan in Salida seems to be bridging the gap between school and community at least for a part of our graduating seniors. Among this group the plan is reducing unemployment by making these seniors with experience employable when they complete their school work.

One of the requirements is that employers must not in any case dismiss any of their full-time employees when the student worker comes on the job. The natural turnover in employees is found to be as great if not greater than the number of workers that are being taken care of each year by this plan; hence it would indicate that this experiment might continue to be used year after year in our community.

A great deal of tact and diplomacy must be used on the part of the coordinator since he makes the contacts between the school and the community. The school must also be watchful of the kind of workers it sends into this type of employment. Only those young people who have a serious desire to find a place in life are likely to be of much value in such a cooperative scheme as this.

To Buy or to Build

Supervision gives vital results when tests are built for specific purposes

By JOHN L. STENQUIST

MENTAL measurement, like other developments in education, passes through stages of development. As in the case of medicine there has been a kind of witch-doctor stage, typified by phrenology and astrology; there has been the "novelty intelligence test" stage, typified by sensational Sunday paper articles on "nut tests" reminiscent of World War days. This was followed by a postwar period during which there appeared an epidemic of test rash when new tests of unknown characteristics seemed to spring up behind every bush.

Now we are in another stage in which emphasis is being placed on the building of more accurate and better defined tests. What is required of a test to make it scientifically trustworthy for more specific purposes is engaging more attention. We are beginning to realize that there are many different types of things that tests may do; that one type of test is not suitable for all uses and that results are measured by their suitability.

Where Accuracy Is Essential

It is axiomatic that the value of any testing program is directly proportional to the excellence of the tests utilized. We are approaching the stage in educational testing in which we shall be more critical of the tests employed. For it is becoming clear that tests can be made scientifically and yet be tailored to fit the particular purpose for which they are wanted.

We have for a long time been in the patent medicine stage. Like the man who buys his medicine merely because he sees it advertised, we tend to go to the test seller and buy what we find that looks interesting. Or, finding none, we tend to slap together what looks like a good test and to use it with seriousness. This is probably chargeable to the youthfulness of the testing movement, the comparative scarcity of tests and the labor involved in creating trustworthy new ones which may possibly serve only in one department.

Some tests now on the market are fortunately of somewhat universal value, well made and useful for certain purposes. The best of these tests have done a great service in many testing programs.

This, the second of three articles, will point out principles of test selection that we have found helpful. In Baltimore we take the position that when a suitable test can be bought, it is more economical to buy it and to expend our energies in making the best use of it than to build one for a duplicate purpose. We have followed a general policy of alternating between nationally standardized and locally standardized tests.

But it seems likely a larger number of tests will be especially built, but scientifically built, for the specific purpose that each tester has in mind. A most important corollary is that users of tests will be required more and more to set down far more definite specifications as to what it is they want to accomplish by its use.

Use Determines Type of Test

What specifically is it that the tester wants his test to do? The answer to this question must inevitably determine what type of test should be used.

Does the proposed test measure what the user desires to measure? Is the proposed test an adequate measure of what is being measured? Can it be scored objectively? Can it be used as an incentive to pupil effort? Will it serve as a means to more individualized teaching? Will the test tend to center attention upon desirable aspects of the subject? Does the test afford sufficient repetitions of a specific item to give genuine diagnosis? Are the reliability and validity of the test sufficiently high to serve the purpose in view? Does the test give a reliable measure of defined skills or attitudes, or does it merely measure the extent of subject matter memorized?

Uncovers Curricular Objectives

In building tests to meet such criteria there lurk important educational values. To define specifically what is sought frequently requires serious scrutiny of curricular objectives, a clarification of thinking that may be of as great benefit to the teachers as the creation of the tests themselves.

In Baltimore our supervisors of English, geography, history, science and mathematics lately became convinced that much could be accomplished through suitable tests to measure the range of knowledge displayed within a school, the degree of mastery of the course of study and the phases that should receive greater stress. When available, commercial tests, which seemed to serve the purpose, were purchased. When such a test failed in some particular to fit the need, each department decided to build tests especially designed to do more precisely what was wanted. The matter was taken up at departmental meetings of the teachers involved, and committees were appointed to undertake the job.

A few committee meetings quickly disclosed the fact that the objectives

of the various courses often were too general to be used as specific guides in test construction. This led to definite and serious attack on the definition of objectives and involved committee meetings extending over many months. This unexpected activity from committees, originally assigned merely "to prepare a test" may become of more value than the tests that they will produce later; it has stimulated all teachers and supervisory officers to analyze the specific elements implied in the more general objectives of growth in the course of study. When teachers learn what it is they desire to measure, they simultaneously learn what they must teach if children are to attain the goals of the unit, the semester or the year's work.

In addition to defining objectives, if valid and reliable tests are to be built, a study must be made of the techniques of test construction, a valuable training for any teacher. There have been great developments in the science and art of test construction in recent years. Excellent literature is now appearing in this field.

How Tests Are Built

The test builder, after having determined his objectives, must learn how to select a sampling of elements from the field he is going to explore. He must devise ways of sampling skills, abilities, information, understanding and appreciation, as a basis for the individual test items. He must decide what type of exercise is best adapted; how best to arrange and present each item. He must have a sound method of evaluating performance on his test and must have some check on its validity.

Many reasons exist for urging that a local achievement test contain an adequate sampling of the whole area of experience included in a course of study. Unless this is done the testing program will throw out of balance the distribution of teachers' and pupils' time and energy. It is axiomatic that whatever is measured will be taught, not because a teacher teaches in order to have pupils pass tests but because diagnostic tests reveal weaknesses and strengths and consequently disclose the teaching point. Empirical and experimental evidence shows that, when teachers and pupils know definitely what is to be learned and how well they are mastering the learning, both are enabled to proceed with stronger motivation and sharper attention.

It is equally imperative that, within any phase of experiences measured, an adequate sampling of all elements involved be made. If a test of English usage measures mastery of subject-verb agreement only when the verb immediately follows the subject, the test cannot claim to sample the learning difficulty and types of errors made by children and adults. So, too, with any of the fundamental operations in arithmetic. Addition is not a unit difficulty; neither are addition of whole numbers, addition of fractions and addition of mixed numbers the only three phases of addition.

Suggests Analysis Method

Again, if tests are to be worth the time of construction and administration, an analysis must be made of the relative difficulty of the items included in the tests. Too often amateur test-makers designate, in advance of try-out with pupils, a value to each question and "a passing mark" for the total test.

For impartiality and as a matter of sound test construction, however, indexes of difficulty must be assigned after the evidence is available as to which items pupils actually passed or missed. Furthermore, it is essential that enough repetitions of a specific element occur in a test to avoid chance success or failure.

To summarize, a test-construction program has educative value to the teachers and supervisors engaged in building their own test under the following conditions: (1) that a careful analysis be made of the objectives of the course of study, (2) that an adequate sampling be made of the areas of experience implied in these objectives, (3) that an adequate sampling be included of the elements involved in each phase of any area of experience, (4) that sufficient repetition occur of each specific kind of item in order to avoid chance success or failure, and (5) that the test be indexed for difficulty on the basis of responses from pupils of known status — grade, age, intelligence and level of achievement in respect to the objective measured — rather than upon values assigned in advance by test-makers.

As an aid in supervision aiming to improve instruction, tests have many purposes. To measure pupils' growth in respect to grade and term; to diagnose pupils' difficulties in learning; to focus the attention of teachers, who make the examinations, upon the basic concepts, significant habits and emotionalized attitudes that are the outcomes desired in the course, and similarly to focus the attention of the pupils — these we have found to be worthwhile uses. Tests built by us, to meet the objectives of our courses of study, are more and more called upon to serve these specific and essential purposes.

The duplicate class analysis charts technique places in the hands of the visiting supervisor, the principal and the assistant superintendent in charge the complete analysis of the test findings after each semiannual survey is completed.

This constitutes a powerful instrument of supervision having vital results. With the mass of detailed information displayed on each chart, supervision need not be blind or merely inspectorial. On the contrary the problems objectively revealed by tests open the door to constructive supervisory action.

Results Are Summarized

Thus is emphasized again the critical need for the best possible tests, tests that will disclose issues of consequence in the improvement of instruction.

Following each survey, summaries of results for the city as a whole, pyramided for classes, schools, districts and the city as a whole are prepared by the bureau of research. On the basis of this information, the board of superintendents formulates policies, allocates teachers and principals and plans reorganizations, instruction and courses of study in terms of the educational needs of the pupils. With really significant tests the testing program functions in a substantial way as a basis for sound administration — a type of administration in many instances in sharp contrast to that of the past.

No matter how skillful the administration or how excellent the tests, if the time and labor involved break down the normal operation of the school, testing is worthless.

It May Be Their Glands

By MATTHEW MOLITCH, M.D.

A GROUP of 269 boys, between the ages of nine and seventeen, with endocrine disorders, were studied in detail from the standpoint of school, adjustment, mental level, behavior and personality.

The table on the next page gives the distribution of various types of glandular disorders. As a short summary, it may be stated that the hypopituitarisms are the short, proportionately developed children whose sexual development, both primary and secondary, is retarded. The hyperpituitarisms are the proportionately developed giants whose external features and internal organs also are enlarged. The Fröhlich's, or adiposogenitalisms, are the fat children with small genitals. Their height is usually normal for their ages, but they may be even too tall for their ages.

The hypogonadisms are the tall, thin children whose genital organs are infantile and the secretions from their gonads insufficient. Their height is due to a prolonged growth because of the absence of the inhibiting influence of the sex hormones.

Show Unusual Characteristics

These problem children are tall and are distinguished from the hyperpituitary giants in that they are thin and have long extremities. The children with hypergonadism are heavily built, like wrestlers, with excessive genital development. They grow rapidly in early life but stop around the age of fourteen or fifteen because of early sexual maturity.

The children who show no evidences of secondary sexual development are grouped together because they are within the normal limits of height. As these children grow older, they either mature sexually or fall in with the hypopituitarisms or hypogonadisms.

The foregoing group of children probably represents varying degrees of sex hormone deficiency with a subsequent imbalance of the growth and sex hormone ratio. Those with undescended testes are considered separately, although they usually are accompanied by a retarded secondary sexual development. Those with unilateral undescended testes may have a normal sexual development, both primary and secondary. The diagnosis of hypothyroidism was made exclusively on those with retarded bone development. This is a subclinical type of hypothyroidism and does not include the cretins or those with myxedema.

Tests Are Given

The findings of general mental level for this group were made by A. K. Eccles and Marian Derrick in the following manner: Upon admission, each of these boys was given a psychologic examination including one of the following tests: Stanford revision of the Binet; Kuhlman-Anderson; Morgan's Mental Test A or B; also the mirror drawing test, dynamometer for strength of grip, and the Witmer form board. In addition to these, one or more, usually about three, of the following performance tests were given: Healy Picture Completion II, Porteus Maze; Stenquist Assembly I; Stenquist Mechanical Aptitude I; Knox Cube.

We did not consider it practical to use intelligence quotients because of the differences in the tests employed and the consequent incomparability of the quotients obtained. Other factors were the differences in nationality and color, and the debatable question as to whether intelligence quotients are sufficiently constant to warrant comparison in this type of data for different ages, and still further because of the uncertainty of the upper life-age limit for calculating quotients. Our inferior normals range from 75 to 90 in intelligence quotients.

The table gives the distribution of the cases according to mental level. The hypopituitarisms, or the short children, have more inferior normals than the control group at the expense of the average normals. The hyperpituitarisms, or the proportionately developed giants, have more average normals and less feebleminded. The Fröhlich's Syndrome cases, or fat children, have a greater number of inferior normals.

This is also true for the tall, thin children representing hypogonadism. The heavily built children, or the

All children who are making poor school progress and who are chronic truant and behavior problems should be given a complete medical examination, including an endocrine survey, as the first step in eliminating those factors that make adjustment to school and society difficult.

DISTRIBUTION AND MENTAL LEVELS OF BOYS WITH ENDOCRINE DISORDERS

Diagnoses	Total		Mental Levels*					
			Average		Inferior		Subnormal	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Hypopituitarism	56	20.8	13	23.2	25	44.7	18	32.1
Hyperpituitarism	65	24.2	24	36.9	23	35.4	18	27.7
Adiposogenitalism	10	3.7	3	30.0	4	40.0	3	30.0
Hypogonadism	36	13.7	11	30.5	14	38.9	11	30.5
Hypergonadism	16	5.9	5	31.3	4	25.0	7	43.7
Delayed Secondary Sexual Development	50	18.5	13	26.0	23	46.0	14	28.0
Undescended Testes	12	4.5	5	40.7	6	50.0	1	8.3
Hypothyroidism	24	8.9	8	33.3	7	29.2	9	37.5
Total	269	100.0	82	30.5	106	39.4	81	30.1

*The average for a large control group is 28 per cent average normal, 39 per cent inferior normal and 33 per cent subnormal or feebleminded.

hypergonadisms, and the children with deficient thyroid function, both have more feebleminded than in the control group. Those with delayed secondary sexual development and especially those with undescended testicles have fewer feebleminded.

Every one of the children was given a Stanford Achievement Test, and only nineteen out of the entire group made normal scores. The remainder showed retardation from one to six years. No persistent defect was noted in any subject in any group of endocrine disorders. The children with undescended testes made the poorest showing as compared with their mental ability.

Endocrine Disorders and Truancy

There was present a higher rate of truancy and overt behavior in children with endocrine disorders than in the control group. The children with undescended testes were the brightest of all and the boys with endocrine disorders were the most serious truants and the most frequent school problems.

Truancy and school misbehavior were more prominent in these children, while other offenses were not more common than in the control group. From the standpoint of personality these children were considered in such negative terms as unstable, suggestible, immature, infantile, emotional, neurotic, lazy and loquacious. The children with undescended testes were considered the worst of the entire group studied.

Adequate and potent preparations are now available for treating children with endocrine disorders and favorable reports from many clinics have appeared during the last five years.

Explains Poor School Rating

The poor school adjustment of children with endocrine disorders may be explained from two standpoints. Their instability prevents concentration with the result that failure and truancy are inevitable. Many of them are unable to sit quietly for any length of time, which leads them into overt schoolroom behavior. The reason many of them are truant is because they appear physically different from their schoolmates. A child may be too tall for his age and feel out of place with smaller children.

A small child, when placed with those much larger, may feel that he has to compensate for his short stature by calling attention to himself through overt behavior. The fat boy or girl may feel sensitive about his physical appearance and become truant. The tall thin children tire easily and are often wrongly considered lazy and lacking in initiative. The heavily built hairy children suffer from excessive sexual stimulation and may become sex problems. The most unstable of the entire group are those with undescended testes. These boys are both behavior and school attendance problems. They are very bright, but they make poor progress in school work and require constant supervision and encouragement.

It should not be misconstrued that all so-called problem children have endocrine diseases. Many have kidney, heart and gastro-intestinal disorders that affect school progress. Neurologic and mental diseases, such as chronic post-encephalitis and juvenile paralysis of the insane, are occasionally found in the children referred.

Physical Defects Come First

Before sending a child to a psychiatrist or a psychologist we should be sure that all physical defects have been found or eliminated. Psychiatric or psychologic treatment then may be given in conjunction with medical treatment.

All children who are making poor school progress and who are chronic truant and behavior problems should be referred for a complete medical examination, which should include a careful, thorough endocrine survey.

Learning by experience how to solve printing and production problems connected with their own school annual.

Small School Annuals

By L. H. HALE

IN THE last five years we have learned much about the printing of an annual in a small school. During each of the five years, our annual has won first place in a statewide contest for books compiled in a high school of 200 enrollment or under. Production of the yearbook has become a worth while activity and the pride of the student body. The editor of our annual and other members of the staff are accorded the same praise that is awarded aspiring thespians or the star athlete.

We have discovered that individuality must be shown in an annual if keen interest is to be maintained. The community, as well as the student body, will respond to the magic of a well-planned annual if the changes that occur each year show preparation and forethought combined with a complete program.

An annual should be a miniature stage across which the major activities of the school march in representative and picturesque array. Besides being an accurate pictorial calendar of the year's accomplishment, it should contain on feature pages the attraction for pupils that means a keepsake increasing in value as time passes.

To transform pictures, paper and ink into a living record of the year, there are a number of facts and figures to take into consideration. First, the annual should be the work of deeply interested pupils who have taken an active part in the respective activities. In our school the seniors sponsor the annual, as they are the most interested group; however, at all times they have had the cooperation of the underclassmen. In brief, the annual should be work by and for the pupil.

Second comes the financial problem, undoubtedly the greatest in producing a successful annual. Several possible plans for financing the annual are submitted here.

1. By placing purchase price at actual cost: Charging the purchaser for

the actual expense of each yearbook will be sufficient for the entire cost of production, but it presents a major problem in that it destroys the feeling for which we are striving. Because of its necessarily exorbitant price only a few can afford the annual; it ceases to be a memory book and becomes the collector's trophy.

2. By advertising: Although this plan has never been used in our school, it has proved successful in larger schools situated in more densely populated districts. By this method, local merchants and near-by colleges and universities can advertise on the concluding pages of the yearbook, much to the advantage of its business manager. In the smaller community, it is usually unnecessary for the business man to advertise widely, thus it creates an unwanted feeling of charity toward the school annual.

3. By donation: This method is more difficult to achieve with current financial conditions than it was a few years ago when everyone could respond liberally to such pleas. It, too, verges on the feeling that the school expects and requires too much of the community. This suggestion may succeed in an affluent section, but it is not highly recommended.

School Board Pays

4. By the school board: In some schools the entire cost of the yearbook will be casually assumed by the school board. With this easy method, comes also an alienation of school interest, conjuring the annual into a mechanical thing that quite naturally appears at the end of each school year. But if no other more constructive plan presents itself, this is a satisfactory way of financing the school annual.

5. By activities sponsoring individual pages: In communities in which school affairs are popular the following plan for financing the annual has been executed: each extracurricular activity interested in obtaining a page in the annual for a resumé of its year's accomplishment budgets its proceeds to include an annual fund. By presenting plays, debates and athletic events to the public, the financial problem is partially solved. Although this is a successful arrangement in itself, it seldom can be made to finance the project adequately.

6. By student activity tickets: A most profitable method developed in our school system is the sale every six weeks of 60-cent activity tickets. This fee entitles the pupils to the privilege of attending school functions as well as an inexpensive annual at the completion of the term. Approximately 30 per cent of the money collected in this way goes to the yearbook treasury.

7. By the use of a single or of a combination of the foregoing methods, a good school annual can be made available to the pupils at the lowest possible price.

One lesson that experience has taught us in our annual sales is that it is best to have an annual shortage at the end of school. This makes possible an earlier sales campaign.

Preparation and forethought no less than a talented staff are requisites in producing a prizewinning annual which mirrors the year's accomplishments and activities. At the same time it must have enough individuality to catch and hold the pupil's interest.

Today, I could sell my last year's annual for triple its cost. Patrons order and pay earlier, thus eliminating the troublesome problem of collections.

Now let us consider the necessary steps in the actual production of the book.

1. When to start: It is paramount to begin preparation for the annual's production as soon after the beginning of the school year as possible. New ideas and suggestions for the annual may come any time during the year or the preceding summer to the alert producer. A well-organized file must be kept so that a galaxy of carefully prepared notes may be presented to the staff for consideration early in the fall.

2. Photography: Individual and group pictures must be taken as one of the first steps in production. Because the photographic work of the annual cannot be undertaken by the school, it is best to have it done and out of the way before actual student participation begins.

3. Staff: Care must be taken in staff selection. Only pupils who excel in a type of annual work should be appointed to a responsible place on the staff. Requisites of a satisfactory staff member are executive ability, personal talent and dependability. Assistants are assigned to individual staff members. It is desirable to select persons who will work together willingly.

4. Compilation of material: Popular vote of the senior class decides the dedication of the annual, which in turn determines the keynote or theme to be used. All written material, such as class histories, activity accomplishments and feature pages follow this theme. It is gathered, corrected and arranged with the approval of the sponsor of the activity represented. Divisions of the yearbook are planned and carried out through staff chairmen.

Originality Marks Art Work

5. Art work: It is also the privilege of the seniors to select the color scheme, paper and general appearance of the annual. Many varied ideas are presented and discussed before the final decision is made. Border page drawings and the cover design are the responsibility of the art director, a prominent member of the staff.

6. Printing: As we have our own printing press we assign the task of printing to the printing class. Here the underclassmen assist, and any interested pupil whose grades merit it may receive printing instruction. Although typographical errors occur, a greater number of pupils are given a part in the actual construction of the annual.

7. Assembling: When the printing is completed the pictures are tipped in, and the pages are counted and stacked. A special glue and a small pressing machine binds the books tightly. Immediately, the books are checked for imperfections in the binding process. After checking and drying the current yearbook is ready for distribution by the staff assistants.

Who Should Choose Textbooks?

State *v.* Small Unit Adoptions

By GLEN G. EYE

THERE is, from time to time, a flurry of words about the adoption of textbooks on a statewide basis. Often the sentiment registered is in opposition to statewide adoptions. Occasionally these outbursts are emotional and exaggerated. Invariably, the adopting body is the focal point of criticism. Whether or not these criticisms are justified, the degree of correction to be expected in case some unit, other than the state, were set up as the basis for adoptions may well be anticipated.

Most textbook commissions have two functions only. The first is to determine the subjects that are to be opened for new adoptions, and the second is to select the textbooks. At the outset, the practices of several states are open to possible shortcomings. The lapse of time between the opening of a subject and the final adoption is often too short. A thorough study of textbooks in any subject cannot be accomplished in a few weeks' time. Several months should be reserved for the careful study of the books submitted. A part of this time should be devoted to private study, without the assistance of the representatives of publishing companies.

State Laws Are Too Rigid

The laws providing for state adoptions are entirely too rigid with regard to the subjects, the manner in which the course is to be executed, and the problem of keeping in step with the best elements of educational progress. Some body — state board of education, the adopting body itself, or other educational groups — should have certain discretionary powers in these three items. It should not be necessary to make identical adoptions for wholly different teaching situations. Rural pupils should have a different program in agriculture, science and nature study than the city children. Likewise, schools with well arranged rooms and adequate equipment may need different texts than the meagerly equipped school.

If state adoptions are to be continued as the accepted practice, it is to be hoped that the selecting agencies will possess the insight and wisdom to recognize their own educational needs and adopt their textbooks accordingly. Local or small unit educational directors may be no more or no less immune to the capricious selection of textbooks than the individual members of state textbook commissions. The point to be considered is which one represents the best educational policy, assuming efficient selections in both cases.

All Groups Are Criticized

Much criticism is directed against the adoptions made by state textbook commissions. This criticism takes the standard form which is attached to most official and semi-official agencies. Many of these critical remarks are without any foundation of fact. Regardless of the task, some people will not be satisfied with the results.

One common criticism is that textbook commissions show favoritism toward certain publishing companies. Critics who follow this tenor are seldom able to indicate the approximate percentage of adoptions held by the individual companies. The fundamental consideration in the selection of textbooks is not which company gets the business, but whether or not the books best serve the educational needs. Any comments on the decisions of a textbook commission should be based on that point of view and on no other. If a commission or a local committee degrades itself by selecting a book on the basis of the publisher rather than on the educational merits, the commission or committee fails to recognize its real obligation.

Another common criticism is the usual one of corruption. Official investigations are seldom initiated. This should be the procedure when factual evidence is at hand. Most textbook commissions would not object to any type of investigation that might be carried out in a legal and orderly fashion. The members of such a commission should not resent a request for such an investigation. If their personal position cannot stand questioning, they deserve the sympathy of no one.

Some agency must select and adopt textbooks. Many authorities in the field of education are generally agreed that the unit of administration should be the unit of textbook adoption. Undoubtedly this would constitute good practice only insofar as each individual school unit has well qualified officers. The selection of textbooks is not a simple matter. It necessitates a considerable degree of technical knowledge in the field of education.

Which Agency Is Best?

If state commission members do not select the textbooks, the task will fall upon the executive officers of cities, villages and counties. The criticisms made of the practices of state commissions then may be transferred to the new agencies. At the present time, the states having city, county and township adoptions, both under professional and lay control, apparently develop as much comment as states having state adoptions.

Small unit adoptions are better adapted to local situations. There may be certain handicaps, however. Small towns, counties and townships are at some disadvantage because

their administrative officers have little time to give to the tasks of an adoption. These small units too often do not get the full benefit of the competition, because the publishers and their representatives concentrate upon those units that possess the greatest sales possibilities. In the sparsely settled states, many school units seldom are contacted by the publishing companies. State adoptions, presenting greater sales opportunities, develop the competition.

The adoption method of some states is not altogether in harmony with the best methods of instruction at the present time. Under the study-recite method of teaching, one textbook may be sufficient, but under the new activity type of program more than one text is needed adequately to support the program. In the well organized activity program, several textbooks are needed for basic use. There is need for multiple textbook adoptions. It must be recognized that the activity program has not, and probably will not for a good many years, become the state policy of instruction. The conservative move would be to liberalize present textbook laws rather than to abolish them. It might be sufficient that the law specifically permit the textbook commission or some other educational agency to use its discretion in the type of adoption best suited to the educational program of the state.

Some attention should be given to the state authority which selects the personnel of the state commission. Such authority might be vested in the governor, the state board of education, the state supreme court or some other body. This selection, as nearly as possible, should be removed from politics.

State textbook commissions should seek methods of improving their plan for the study of textbooks, allowing ample time for this study. When a decision is made as to which subjects are to be opened for adoption, a set of criteria should be established as a basis for studying the textbooks that are submitted. This would put much of the consideration on an objective basis. At the close of the adoption, the commission should be required to publish a report of its selections, basing this report upon the critieria set up in the beginning and including a summary of the analyses made and a statement of the reasons for adopting the books.

If the trend is in the direction of abandoning state adoptions, a safe procedure would be first to exempt first-class districts, extending this exemption to others gradually. Generally, rural schools want books approved by the state as do many small village schools. In the larger schools, there are members on the educational staff who have the ability and the time to consider the selection of textbooks as an essential part of curriculum administration. For such school systems, it would be a convenience and an educational advantage for them not to be bound by the rules of state adoptions.

Evaluating the Radio

By LAURA M. JOHNSON

THERE is no medium of entertainment or tool of education more universal, more extensive than the radio. The reach and influence of the radio extend to dimensions of invisibility that are immeasurable.

In this country the radio is a commercial enterprise and the type of broadcast is controlled by the American public, since money cannot be made without pleasing the audience. The radio brings entertainment and edification to the most heterogeneous audience in the country. Indeed, such an audience is the judge and the dictator of what type of program is to be broadcast. It is a quirk of human nature to give preference to that which is pleasurable over that which is profitable.

The basis of judgment today is the taste of the American radio audience and that taste may be summed up in the statement, "We want what we like; and we like entertainment." The radio, like the drama, exists primarily to entertain, not to preach, not to teach, not to propagandize. Yet in the guise of entertainment, education may be broadcast. In other words, education can be made entertaining and entertainment can be made educational.

High School Is Place to Start

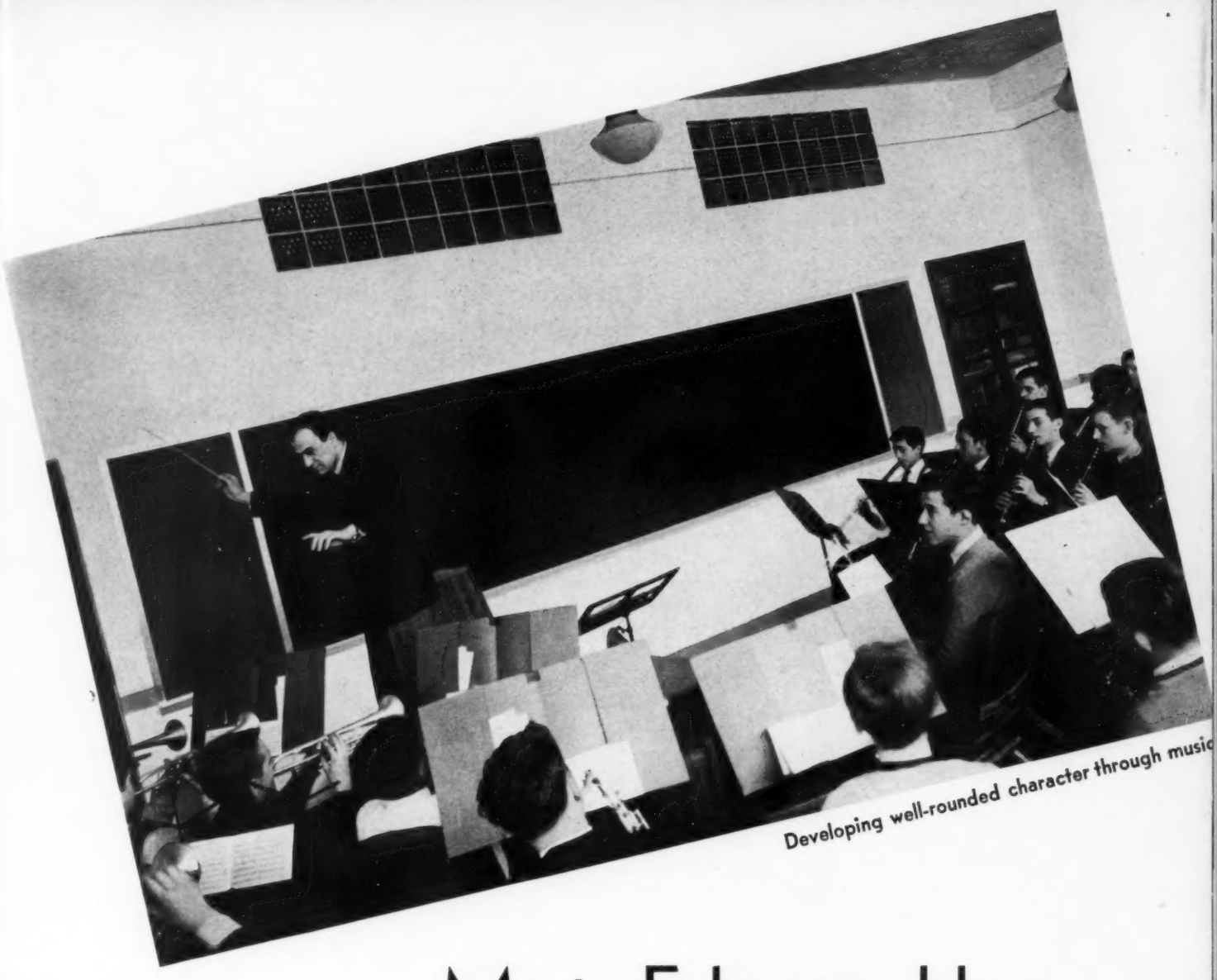
Through the schools, standards of radio evaluation can be established. It is true that earlier than the high school age the principles of discriminating taste can be developed, but it is the high school age that marks the beginning of adult point of view. The high school pupil should be given a fairly good standard of evaluating what he hears on the radio. It is through the high school that the first concerted effort can be made to elevate the tastes of the American radio audience, to seek entertainment not for its own sake but for what it offers in edification and culture.

Censorship Isn't the Idea

The development of radio appreciation can be effected only by constructive aims. It is not the prerogative of the radio critic to censor or to condemn. Nor should it be in the spirit of reformation that the high school pupil formulates and accepts standards of evaluation of the radio. It is rather with the desire to improve that which is not altogether satisfactory.

Why can't the educational talk be entertaining? The educator has such a great opportunity to lift the level of public taste yet he forgets that he is reaching a heterogeneous audience. He makes his talk too academic for the average person.

Radio appreciation may enrich the curriculum of the high school. It should not be an extracurricular activity. When one learns to appreciate a good program, he invests his time, he does not merely spend his time before the loud-speaker. By prefering cultural broadcasts, by developing schools of the air, by using discrimination in selecting programs, young people declare their nationwide influence to elevate the taste of the American audience.



Developing well-rounded character through music

Music Educates Us

By WINIFRED BUSH

FORTUNATELY for us all, music has ceased to be branded as a medium for the supremely talented, or as a toy for the physically weak or the mentally deficient. Music at last is being lifted toward its rightful position as a friend to all classes and personalities. In the same manner is this subject coming into its own as an agent of intellectual achievement as well as one of cultural advancement. No longer need it be classed as one more "frill" of the educational system, because it so extensively correlates with practically every conceivable department of learning.

It is not difficult to see the close kinship between music and its sister art, English. The entire span of oral expression is dependent upon the accuracy and beauty of the spoken word. The liberal instructor never attempts to develop a singing voice as a separate organism, but rather tries to mold from the raw materials of the pupil a singing voice of charm, the melodic qualities of which will be carried into the speaking medium. The scales and tonal passages employed will contribute just as strongly to safe and pleasant speaking as to correct musicianship.

Nor is this all; clarity of expression, based upon clarity of thought, is entirely fundamental to any artistic performance. From the youngest to the oldest, from the most limited to the most talented, the pupil is encouraged to strive toward this ideal, affecting not only oral but also written expression. Literature, of course, parallels all the arts as to form, content and mode of expression. In the study of music, from the simplest of folk beginnings to the culmination of genius expressed in the masterpieces of musical accomplishment, an opportunity is offered to examine the patterns of prose and poetic writing of similar period or relative circumstance. Certainly there could be every possibility of widening both the literary scope and the literary experi-

ence of the pupil. The folk ballad, the sonnet, the epic poem, the drama —all have their musical parallels.

The benefits of correlation applicable to English would have their carry-over into any foreign language study. The latter, too, would have the additional asset that also belongs to the realm of history; for music, wisely guided, introduces the child to the background history of all the ages, exploring every land and delving into the treasures of every nationality. Historic movements leave their mark upon music as well as upon the other expressions of civilization. Events stand out in the light of their chronologic relationship, and the pupil is led to interpret the present through the past.

All history is not of the past; much is vitally in the making. One needs to be alert to the trends of his own age. No age has richer materials upon which to build than that in which we now find ourselves, and music comes in for its share. Such names as Gershwin, Whiteman, Tibbett, Martini, Stokowski, Toscanini, not to mention a host of others, invite the pupil to seek out the high places and then to sound out the depths of his own musical experiences. Moreover, he learns to judge the relative importance of leisure activities, of which music is surely one of the chief.

Practical Application Is Made

One hears the question, "But what about the more practical courses in our curriculum?" They, too, have their contribution. Music lovers may be divided, generally speaking, into two classes: those who are thrilled by the esthetic appeal of the beauty of sound, and those who are intrigued by the surprising intricacy of its form. The first division let us leave now and turn to the latter.

Mathematics, a science of the highest order and of the most minute system of performance, definitely has a parallel in the science of musical form and analysis. Tempo and rhythmic requirements are interpreted entirely through mathematical precision. The writing of a single measure in a given time signature is determined by the application of simple fractions, and it is frequently approached as such, especially with the plodding beginner. Too, there is followed in the recording of musical notation, the practice of reproducing according to scale. In fact, all of the process of building a musical pattern is dependent upon the nicest accuracy; inspiration without order results in riot rather than art. Not least in importance, yet perhaps most difficult to measure, is the established goal of developing logical deductions, as essential to the artist as to the statistician.

When correlated with almost any subject of the curriculum, music contributes a richer educational experience to the pupil, at the same time broadening his outlook and developing a more tolerant attitude.

Where Science Comes In

Music also finds its place in the natural and physical sciences. The discerning musician early realizes the importance of the physical equation basic to all creative power and expression. Soundness of body and mind must first be established, else the inner genius or the spark of production will be distorted. Obviously, the formation and the function of sound both belong to the realm of the scientific.

Musically, we first attack the problem from the vocal point of view, partly unconsciously, partly purposefully. Bodily reactions, physiological structures and environmental aspects are each given their proper relation to both singer and instrumentalist. The whole subject of tone production depends upon the intelligent use of the breathing equipment and the understanding of resonance. The listener will be interested in the contrast of effects gained by the musical specialists caught by the record or performed in his presence.

Of especial importance to the instrumentalist is the subject of the frequency of vibration, some knowledge of which is necessary to the intelligent listening of even the crudest amateur. One of the more attractive comparisons to be given scientific parallel is that of tone color to real pigmentation and the effect of color and music upon mood and personal reaction.

The practical and the remaining cultural arts have an almost unlimited range of application in music. They, too, have the advantage of being the most spectacular, since they are the most easily demonstrated. Whether the occasion be concert, operetta, or informal musicale, you will find the pupils of will and skill plying their artistic eyes and fingers to a piece of work of community value. Step on the scene some time, and you will see costumes, posters, scenery or informal decorations in the making. No activity is more conducive to group spirit than this massing of skill and talent.

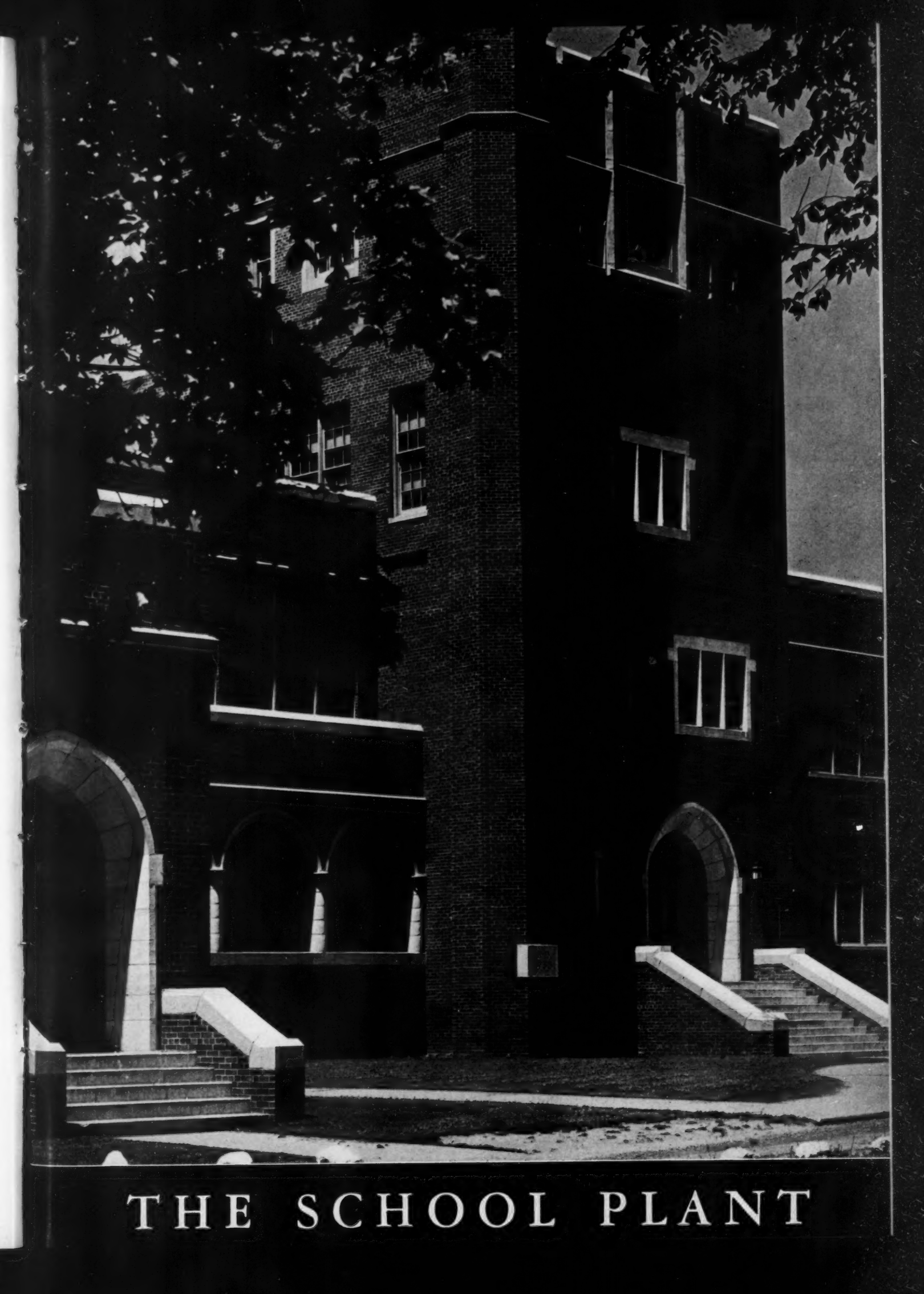
Needless to say the same principles are applied on a smaller scale in less publicized classroom projects. Linked with these are the immeasurable dividends from individual participation of any sort under wise guidance—the acquisition of social poise and confidence, the realization of personal contribution and individual achievement.

No verbal yardstick would be adequate for the measurement of the most important returns of any educational or cultural activity; nevertheless, one can feel a pride and a degree of appreciation for the resultant trends contributing to progress.

Music Expands the Outlook

Correlation of music with the more practical studies in the curriculum has its rewards. Not only does it bring about a definite expansion of outlook and experience, but it gives life a new vitalized and purposeful aspect. Understanding the play and cultural life and activity of the world in all its moods surely must, through an establishment of a new tolerance and sympathy, contribute to a more neighborly attitude at home and a more open-minded one abroad.

Music educates us emotionally and helps to create from maladjusted adults, who are emotional adolescents, independent and stable citizens of well-rounded character, who find their outlets in worthy leisure hobbies and vocational activity.



THE SCHOOL PLANT

Manhasset Builds a High School

Two rooms worth entering. Top of page, the classical room tuned to the classical tradition with decorative pilasters and a frieze bearing a Latin inscription. The art room has a northern exposure and skylights. Between it and the crafts room is a large storage space.

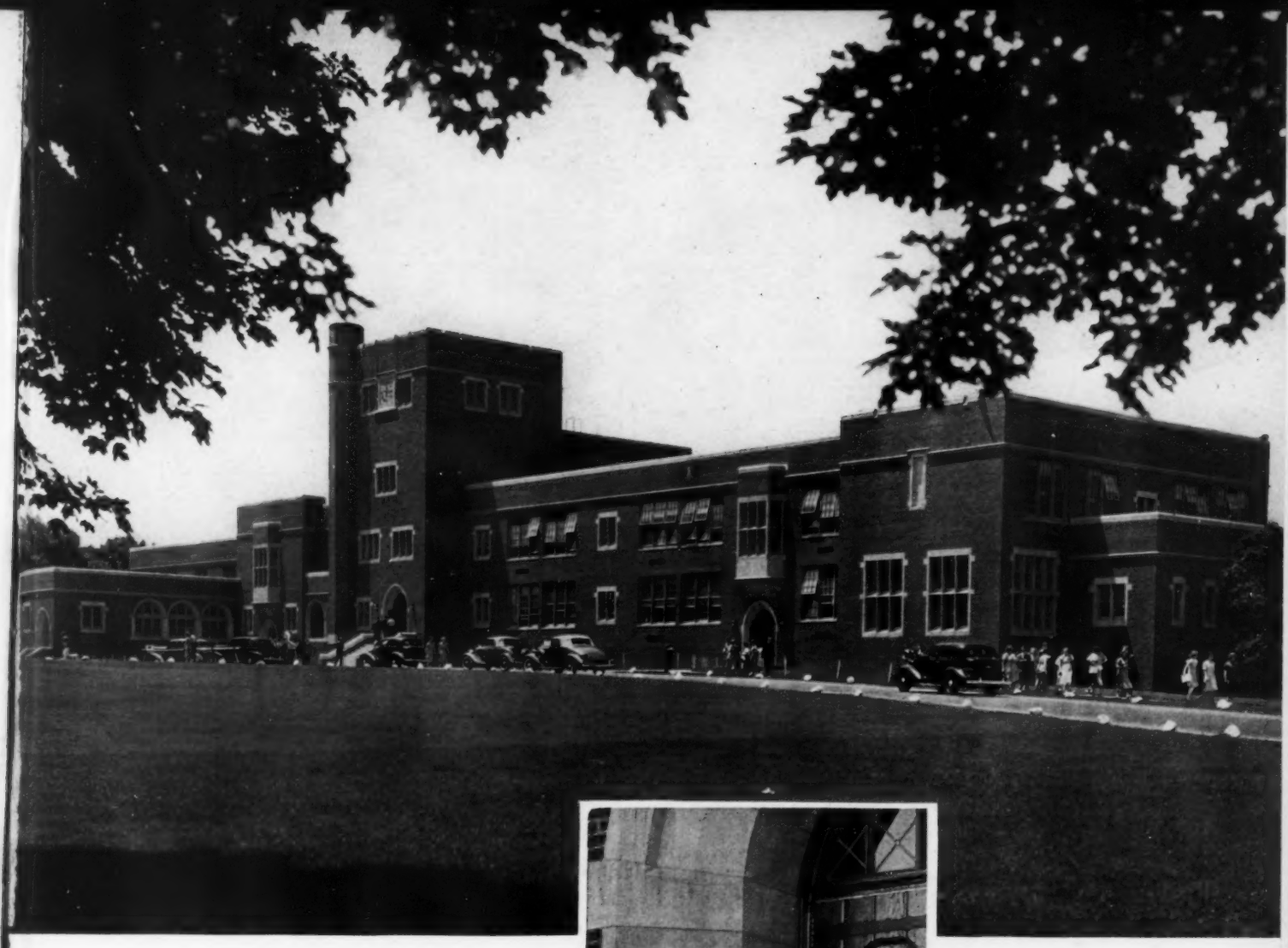
By VINAL H. TIBBETTS

SITUATED in the center of a 22-acre plot of land overlooking Manhasset Bay, a former private estate, the central tower of the new Manhasset High School overlooks and dominates the village it serves.

As one approaches the school from the village itself, which furnishes the only access since the land slopes off precipitately on the other three sides, one is impressed first of all by the spaciousness and natural beauty of the wooded grounds. One also realizes at first glance that here is a plot of land large enough to meet every requirement of a modern educational program, for there is room enough for future extensions or supplementary buildings as well as ample space for the varied individual and group play activities inherent in a forward looking program of physical education. This is attained without in any way detracting from the natural beauty of the campus itself nor does it encroach upon a sizeable acreage that is to be set aside for the gradual development of a park for both school and community use and benefit.

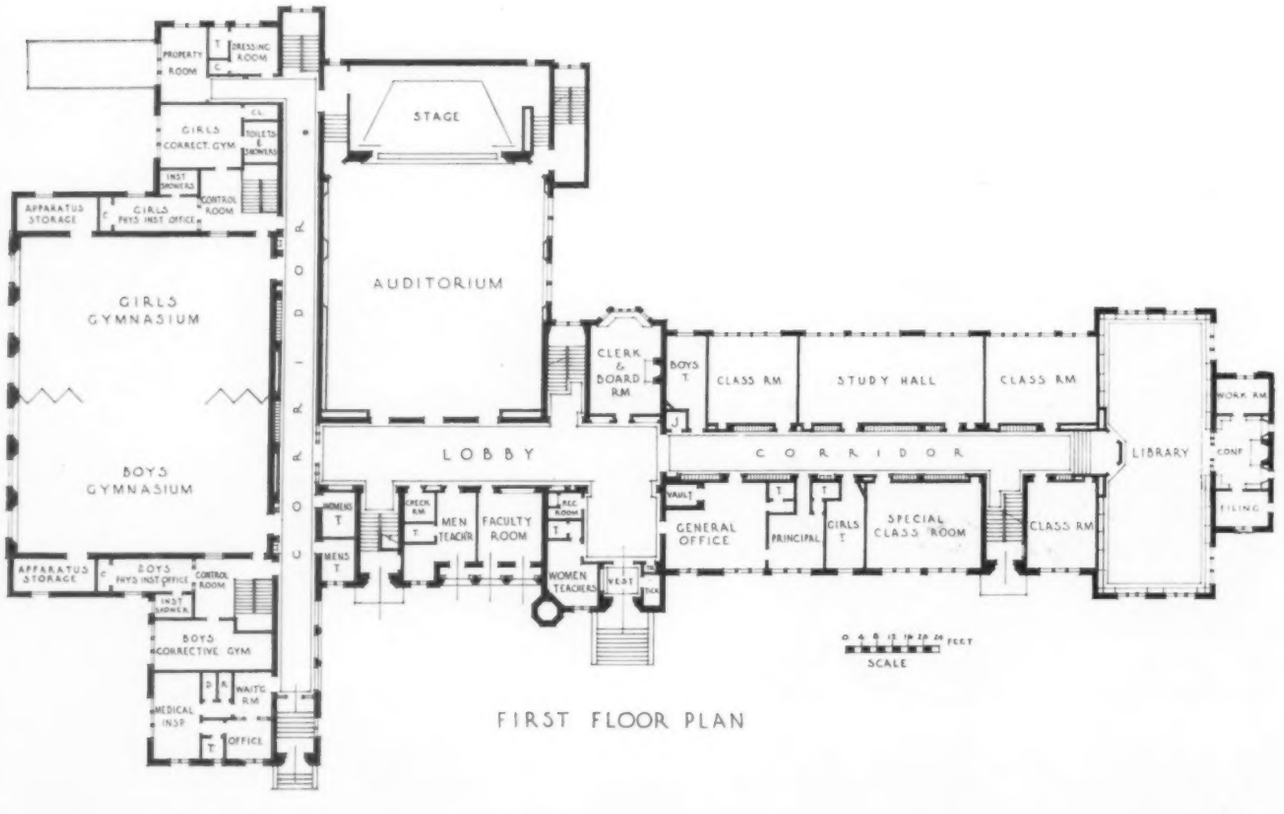
In the foreground nearest the village is ample space for complete football and baseball fields without superimposing one upon the other. This particular area, which in part determined the location of the building itself, was selected in order that traffic incident to games might be controlled without endangering the landscaped section nearest the building. A second, but none the less important reason for the location of these main athletic fields is the level topography of the land, decreasing materially the expense incident to completion of the fields.

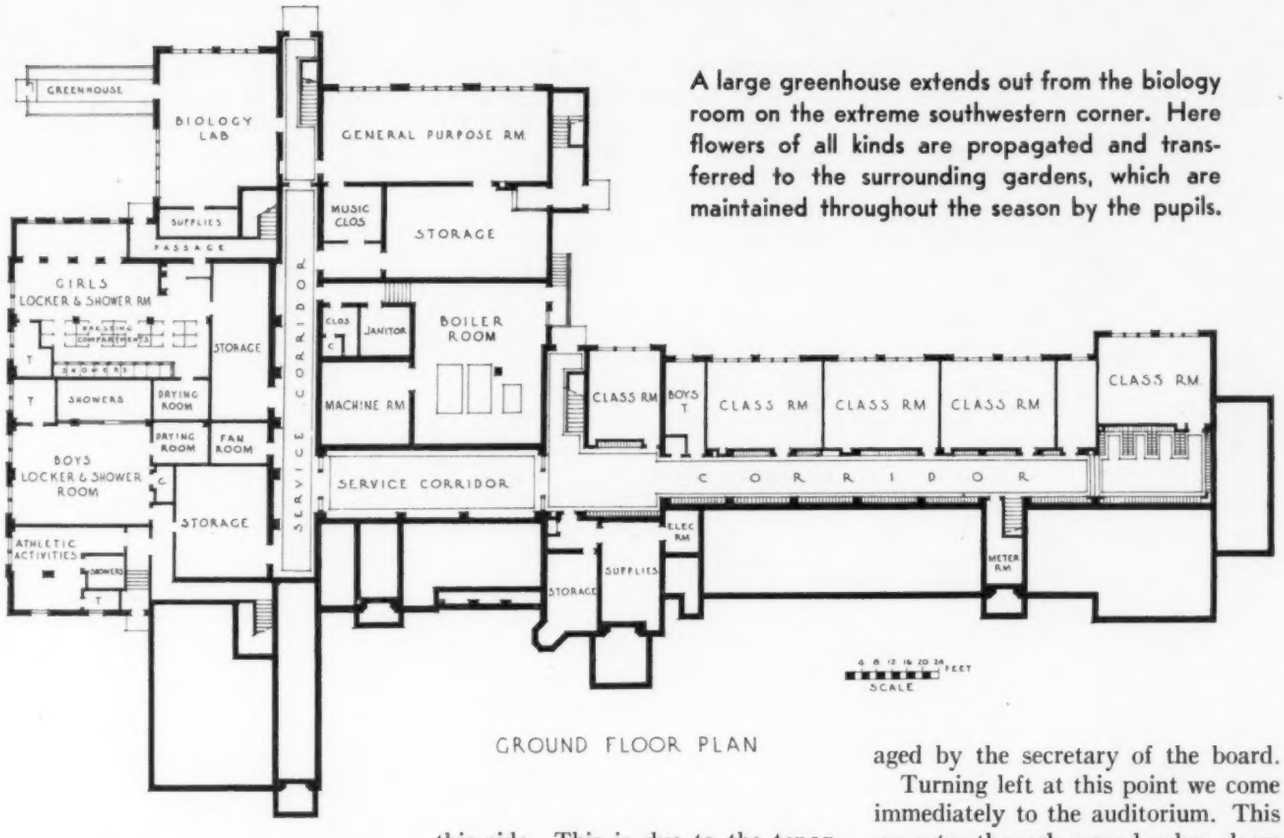
Moving on toward the building by the spacious drives that have been provided, one notices on his right that proper provision has been made for



The central tower of the Manhasset High School is flanked on one side by the main wing and on the other by the gymnasium wing. It accommodates 800 pupils and the total cost of building and equipment was $500,000. The biology room (left) is on the ground floor. A glimpse of the greenhouse is seen through the windows.

"Form follows function" in these interesting plans of the Manhasset High School. The building was designed by Tooker and Marsh, with Roger H. Bullard, associate architect. The building is situated in the center of 22-acre wooded plot overlooking the bay. At the rear this modern school is three stories high. Gymnasium and auditorium occupy one entire wing.





GROUND FLOOR PLAN

A large greenhouse extends out from the biology room on the extreme southwestern corner. Here flowers of all kinds are propagated and transferred to the surrounding gardens, which are maintained throughout the season by the pupils.

parking facilities, a necessity in modern planning. Then the building itself, which is of brick and stone construction, attracts exclusive attention. The central tower flanked on one side by the main wing and on the other by the gymnasium wing, with its cloistered porticoes, is indeed an arresting picture.

In planning the building the guiding principle at all times was the dictum laid down many years ago by that great American architect, Louis Sullivan, "Form follows function," so that the eventual design of collegiate Gothic in no way was allowed to dominate the use to which the building was to be put.

The inviting arched doorway beckons us enter but let us postpone briefly our inspection of the interior while we follow the service drive that extends around the building. On the extreme southwestern corner we notice that a large greenhouse extends out from the biology room, which is on the ground floor. Here flowers of all kinds are propagated and transferred to the surrounding gardens maintained by pupils.

We now come to the rear of the building and are surprised to find that it is three stories in height on this side. This is due to the topography of the land, which slopes off sharply at this point, thus allowing an extra story entirely above the ground level and at small additional cost. Surveying the grounds at this point we see that provision has been made for future play fields, tennis and handball courts as well as a girls' athletic field, while beyond the level land reserved for this purpose lie many acres already growing stately pine and fir trees.

Retracing our steps to the main entrance on the eastern side we enter the spacious foyer. It sets the tone for the whole interior. Here one finds nothing of the garish or the bizarre, but only quiet dignity and excellent taste reflected in the red tile floors and wainscoting and the Jacobean plaster walls above. Gnomelike figures or gargoyles smile and frown upon us from niches above the wainscoting, thereby lending a touch of Old World atmosphere and the classic tradition. The general offices and the office of the principal are on our immediate right and a rest room for women teachers on our left, while immediately ahead is the spacious room where the board of education holds its meetings and where the business affairs of the school are managed by the secretary of the board.

Turning left at this point we come immediately to the auditorium. This we enter through carved oaken doors of excellent workmanship. Inside we are captivated by the quiet beauty that surrounds us in the form of stained glass windows, reminiscent of ancient cathedrals, wine-colored draperies and hangings, red leather seats and carved oaken walls surmounted by plaster of Jacobean texture. The lighting fixtures are in keeping with the rest of the appointments. An extra large stage equipped with lighting facilities and properties comparable to that of a good, modern theater furnishes the school and the community with every facility for its dramatic, musical and other group needs.

A balcony containing a fireproof booth for sound projection seats about 150 of the 700 people who can be accommodated in this room. Immediately off the stage and across the hall of the adjoining wing are dressing rooms and a properties room. Opposite the auditorium are located a cloak room for evening affairs, a rest room for men teachers and a faculty library for professional use.

Continuing, we come abruptly to a corridor running perpendicular to the one we are leaving. This marks the beginning of the large wing devoted entirely to the health and physical education activities of the school

which can be approached through an outside entrance at the extreme eastern end. Immediately inside this entrance is the medical suite, consisting of a waiting room, an office for the nurse, a large room used jointly by the physician and dentist for examination purposes, dressing rooms and lavatories. Completely equipped, even to beds for rest purposes, this suite adequately meets every modern requirement.

Just beyond is the office of the director of physical education, entered from the corridor through a control room from which all activities in the gymnasium as well as the locker rooms below can be governed. This is made possible by a large window looking out upon the gymnasium and by virtue of the fact that the stairs leading to the locker rooms are located at this point. Leading off from this control room is a corrective gymnasium, which is also used for boxing and fencing contests. Directly across the gymnasium an exact duplicate of this set-up, including a corrective room, is provided for the girls.

The gymnasium, one of the features of the building, is 80 feet long, 66 feet wide and 22 feet high. Far above ground level, lighted and ventilated by large windows on three sides, this is indeed an imposing room. A feature of this room is the electrically controlled folding doors in the center which makes it possible to have two gymnasiums by throwing a switch. The wainscoting is of cork, which not only gives architectural relief, but provides for a large measure of safety. Folding bleachers on the north and south sides provide ample seating capacity with an economy of space. Directly off the gymnasium are two large rooms for the storage of equipment.

Continuing on down the hall we come on our left to the dressing rooms and properties room which serve the auditorium stage directly opposite.

Returning to the foyer and entering the main wing of the building which contains the rooms devoted to the traditional subjects such as foreign languages, mathematics and English, we are again impressed with the architectural beauty and good taste that have been attained even in such prosaic details as the recessed lockers and onyx drinking fountains which blend in color with walls and floors.

Our attention is attracted to the first room on our right, which is known as the classical room. Here is a fine expression of architectural imagination and planning, for at slightly additional cost a room that brings back the best of the Roman tradition has been achieved. On the entablature of this room is engraved the following motto contained in a letter from Voltaire to Helvetius, "Quod dicis omnino improbo ac semper jus tuum dicere defendam." Liberally translated this means, "I do not agree with a word you say, but I will defend to the death your right to say it," which truthfully reflects the liberal spirit of the Manhasset schools.

Further on down the hall and at a slightly lower level one enters the spacious library seating nearly 100 pupils. Nothing has been spared either in design or practical appointments to make this room in fact, as well as in name, the center of the cultural life of the school. Immediately adjacent are two conference rooms for pupils and teachers.

On the second floor of the building and at the extreme northern end are two amply proportioned rooms devoted to arts and crafts with a large storage room between. Provision has been made in one of these rooms for a kiln to fire the pottery which has for years been an outstanding feature in the school's curriculum. Near by is a large room devoted to the commercial work of the school where bookkeeping, typewriting and other business courses are taught. Especially designed desks make it possible to meet the varied purposes to which the room is put. The ceiling is acoustically treated, thereby silencing the noise of many typewriters.

Just beyond is the office of the superintendent of schools, placed away from the business affairs of the school for the purpose of attaining in large measure the atmosphere and dignity provided in the headmaster's study of our better preparatory schools. Beyond this office is the home economics department, equipped in every detail for complete work in this field. A hand-manipulated service elevator brings supplies and other equipment from the ground floor to this department as well as to the science department above. Immediately opposite is the entrance to the balcony of the auditorium and at the extreme southern end are a social studies laboratory and a dark room for developing.

On the floor above, which is in the tower, the physics and chemistry laboratories, complete in every detail, are located. The fourth floor of the tower contains two rooms devoted to experimental work in science by instructors and more advanced pupils.

The spacious library (above) seats 100 pupils and is the center of the cultural life of the school. Electrically controlled folding doors make two gymnasiums of the one (right) by merely throwing a switch. Folding bleachers provide ample seating capacity.

The ground floor on the western and southern sides, in addition to providing classrooms for grades 7 and 8, also houses a general purpose room under the auditorium stage which is used for band and orchestra rehearsals, debating, public speaking, dramatics work and visual education. This room was planned for the evening use of community and civic groups as well as for school activities. It readily lends itself to this purpose since it is easily accessible through a direct outside entrance. This works for economy in operation since the remainder of the building does not have to be lighted or heated when this room is being used.

Also on this floor is the biology room with the attached greenhouse. This room was purposely placed at this point in order that it would be accessible to the experimental gardens that surround it.

Boys' and girls' dressing and locker rooms and showers as well as drying rooms for athletic uniforms are on the floor directly below the gymnasium. There are also separate dressing, locker and shower rooms for the adults of the community who use the gymnasium for recreational purposes during winter months.

This entire project, consisting of land and buildings, is not only an excellent example of community planning but represents in a striking way the processes of democratic government and control. Owing to the uncertainty of the permanence of many governmental agencies established under the present administration, including the Public Works Administration through which this building was constructed, the Manhasset board of education sponsored this project with little preliminary education of the voters as to the pressing need that confronted them. As a result of this, and because we were in the midst of a depression, the proposition was rejected in November, 1933.

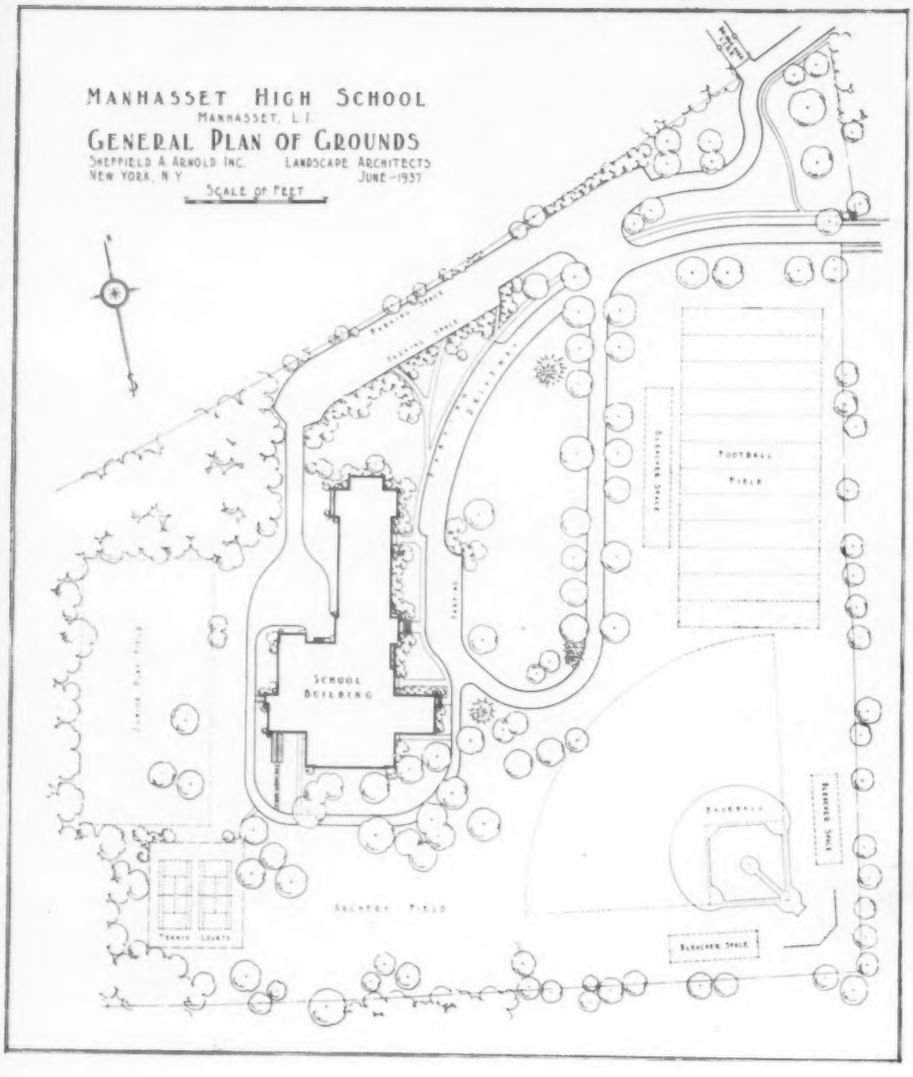
In the eleven months that elapsed before the proposition was again presented to the voters a committee of 100 citizens working with the board of education and the superintendent of schools canvassed the entire citizenry, pointing out to them not only the necessity of building, but also the economy that could be obtained through taking advantage of the low costs that prevailed at the time as well as the generous governmental subsidy, so that on October 5 and 8, 1934, the voters by a substantial majority approved the purchase of the site and the construction of the building.

The total cost of the building and equipment, which provides for eighteen classrooms of various sizes, two art rooms, three science laboratories, two experimental laboratories, a home economics department, and a general purpose room, in addition to the library, gymnasium, auditorium, medical suite and offices, accommodating a maximum of 800 pupils, was $500,000, of which $380,000 represents the direct cost to the taxpayers involved. This amount was arranged to be paid over a period of thirty years at 4 per cent interest. The remaining $120,000 represents the grant by the federal government.

Actual work was started in July, 1935, the corner stone laid with impressive ceremonies on October 19, 1935, and the building was completed in May, 1936. It was first occupied in September, 1936, and dedicated on November 19 of the same year.

Auditorium and home economics room are both modernly equipped. The former is used by both school and community.

One of two conference rooms immediately adjacent to the library—a quiet spot for pupils and teachers. In the spacious foyer gargoyles (left) smile and frown down from the walls upon those who enter over the red tile floors.



Scarcely an evening passes that the school auditorium and gymnasium are not in use by school organizations and adult groups. Driveways and parking space and the proper lighting of these are a part of the landscaping scheme now being developed.

Viewing the Property

By SHEFFIELD A. ARNOLD

IN SELECTING the site for the new Manhasset High School, careful consideration was given to the fact that Manhasset, because of its proximity to New York City (approximately 17 miles), was at that time and is today developing rapidly. Within the last two or three years vast acreages belonging to old estates have been transformed into modern suburban settlements appealing to hordes of city residents who have availed themselves of the opportunity to get out of town. This reason, also the fact that recreational and athletic facilities at Manhasset are correlated to the educational plan, made it desirable that adequate space be provided.

There was finally chosen for the purpose a tract of land comprising a little more than twenty-one acres located to the west of the main town yet convenient to the central thoroughfare. Fortunately part of this property is well wooded, providing excellent opportunities for nature study. The building was placed in the most advantageous position to permit the construction of a football and baseball field with proper relationship to the building. Leveling the ground for these fields involved moving hundreds of tons of dirt, but when the work is finally completed the school will possess athletic fields second to none in modern construction and layout. Portable bleachers are provided.

Part of the landscaping scheme is still in the process of development, but the accompanying plot plan will indicate how the entire school area is being treated. Tennis courts, for example, will be added, and considerable evergreen and deciduous planting will be done to enhance the beauty of the building and grounds. These shrubs and bushes will be selected for their ability to withstand the climate in that section, also to survive successfully without too great attention and cultivation.

In the rear of the building a playfield has been designed for the use of junior pupils where all manner of recreational activities may be practiced. There could be no better place than this wide stretch of even lawn, for example, to engage in such sports as archery and lacrosse.

One of the important problems to be met in laying out school buildings today is the parking space. It is essential that this be adequate and convenient to one or more entrances and exits. In Manhasset particularly, the school auditorium is continually in demand by school organizations and adult groups. On the other hand, safety is a major consideration. Asphalt roadways sufficiently wide to permit an easy flow of traffic, give access to a parking space that is large enough to meet all requirements.

Lighting was also given thought, this for the reason that scarcely an evening passes that the auditorium and gymnasium are not in use. Along the driveway, therefore, lights are placed at intervals to provide ample illumination for the entire property.

Administrative rooms occupy the front of the Wrentham Grade School on either side of the front door. Classrooms are grouped about the auditorium, which rises above the classroom roofs.

One of Three in Wrentham

By EDMUND I. LEEDS

WITH the aid of the PWA and with bonds bearing only 2¾ per cent interest, the town of Wrentham, Mass., was able to rectify a condition that for years has been a source of worry to the parents.

Prior to the erection of this building, both primary and intermediate pupils were housed in a portion of the town hall in the center of the business district. Traffic conditions were unsafe for little children.

Several sites were submitted to the citizens for consideration, resulting in the selection of a 60-acre tract, large enough for the grade school for the smallest children, a future upper grade school facing it on the other side of a forecourt, and on the central axis, crowning the hill, a high school to care for pupils who now receive their secondary education at the Milford High School.

Erection of a concrete stadium on the side of the hill overlooking the athletic grounds, now being developed, is contemplated. As this site is some distance from the center of the town a meeting hall was planned to care for neighborhood gatherings, as well as for the use of the pupils. About this hall are grouped six classrooms, and two additional rooms are contemplated.

Four of these rooms are arranged for thirty-five desks, the two front rooms being for forty. All of them have their own outside doors, enabling different grades to have their own recess and dismissal periods, without disturbance to other classes. This is particularly important in safeguarding the smallest children

Clerestory windows at the sides and a great gable window in the front provide abundant light for the auditorium. This room is also used for neighborhood gatherings and motion pictures.

from the rougher play of older pupils.

Each classroom, besides the usual wardrobes and bookcase, has small cabinets for the pupils' objective study and playthings. Across the rear of the room, over the wardrobes, are storage cupboards for materials.

Blackboards are set only 2 feet and 4 inches above the floor. Bubblers, lavatories and toilets are similarly made for the little ones.

Administration rooms occupy the front of the building on both sides of the front door. Then the classrooms are grouped about the auditorium, which, because it rises so high above the classroom roofs, is abundantly lighted by clerestory windows at the sides, and by a great gable window in the front. This window is above the moving picture booth, which is at the back of the gallery. The clerestory windows are operated by worm and gear openers working on rods controlled from the storage rooms over the anterooms.

As most of the children come from a distance, a well-equipped lunchroom is provided with access to the playgrounds, so that lunch may be eaten outside in mild weather. Liberal playrooms also are arranged. Possibly, a part of this space may be used for manual training.

Toilets are arranged to be used in connection with the play yards in summer. A gate shutting off the stairs will prevent the children coming into the upper part of the school.

The boiler room is provided with a coal pocket to house 50 tons, but the building is now being operated on No. 5 oil with a 3,000-gallon storage tank. The service is most satisfactory, is economical and allows the only janitor time to do the cleaning. The remote control switches for the toilet and main exhaust fans are located in the boiler room. Sprinklers and automatic alarms are used throughout.

The exterior of the building is faced with red waterstruck handmade brick, trimmed with a variegated yellowish stone into which are set the steel sash. This stone trim is carried through the full thickness of the wall. There is, therefore, no wood trim on the inside.

Pitch roofs are of heavy, natural fading green slate. The cap of the main cupola, gutter conductors, flashings, skylights and ventilators, as well as the curved roof over the administrative section, is of 16-ounce copper, turned green with acid, making a pleasing contrast with slate and brick.

The grounds were graded, planted and sodded as a part of the general contract. Special difficulties were encountered in the depth of foundation

and fill required, which added about $4,000 to the cost. The contract was for $81,225, to which were added furnishings and fees.

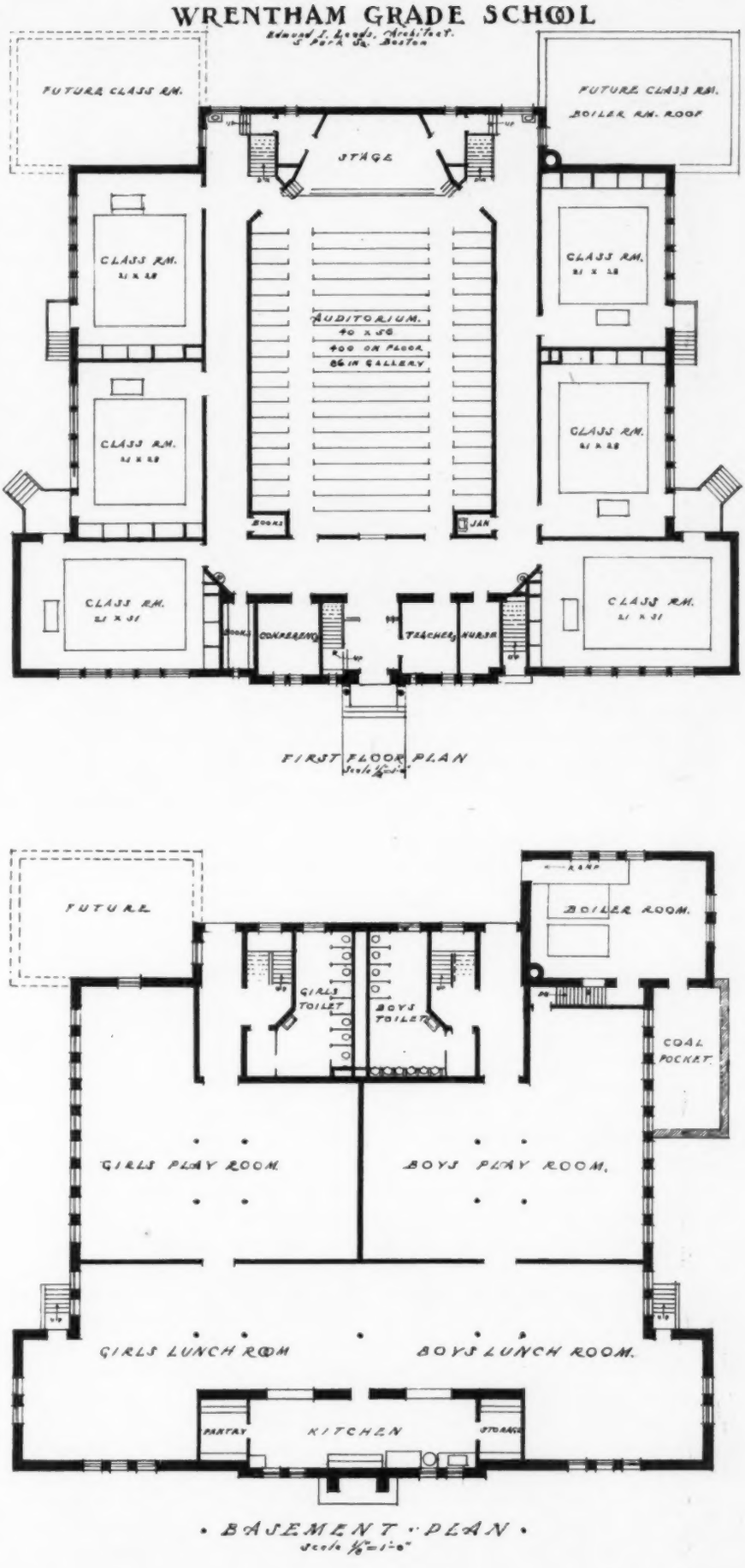
For Better Waitresses

Lack of competent waitresses to meet the demands of the tourist trade in Arizona has resulted in the inauguration of a waitress training program at the Arizona Vocational School, Phoenix, Ariz. Although at the present time there is no cafeteria in connection with the school, pupils are educated in the standards, demands and ethics of the profession. Actual experience is gained through offering the services of the class to churches and clubs.

According to Eleanor Salisbury, instructor, a course of study has been prepared that meets the demands and fits the present equipment. Following is an abbreviated outline:

1. Analysis of trade positions
   - Demands made of waitresses in the various types of establishments
   - Advantages and disadvantages of each
   - Chances for advancement
   - Qualifications for success
     - Personality
     - Personal hygiene
     - Attitude
2. Types of service
   - Arm
   - Tray
3. Study of menu
   - Analysis of food terms
   - Pronunciation and meaning of terms
4. Setting of tables
5. Greeting patrons
6. Seating patrons
7. Selling foods
8. Taking of orders
9. Assembling of orders
10. Serving
    - Left hand service
    - Service for banquets
    - Service for various types of establishments
11. Presenting checks
12. Clearing of tables, loading of trays
13. Short order preparation
14. Application for a job
    - The interview
    - Filling out the application
15. Policies for waitresses

"From time to time," Miss Salisbury explains, "various people in the field come and speak to the class on different phases of the profession. The girls have been successful in finding and retaining employment."



How Does

Each year remove from shrubs such as lilac and honeysuckle about one-fourth of the old stems. New shoots are ready to grow if given half a chance. The best time for pruning is in the spring before budding.

ASSUMING that in the beginning we have a good plan for the school grounds, let us consider planting. The first thing is to get good plants from a reliable nurseryman; that is essential. Buy roots instead of tops because it is the roots that make the top. Do not buy oversized material unless you are willing to take care of it and unless you have money to pay for it. Do not buy plants too small because they cannot take care of themselves. Middlesized materials seem to give the best success.

The planting operation is relatively simple, just the same for cabbages as it is for trees. They are exactly alike in principles of growth. If you know how your plant grows it is easy to make these principles apply all the way through. If you are just a beginner, better learn how the plant grows and then you won't have so much difficulty making it grow when you transplant it. Here is one thing to keep in mind. Dig a hole that will fit the root system. Make it large enough for the roots so they will not be cramped or crowded in the hole, and don't twist them around the plant to get the roots in the hole. There is an old saying, "Better put a 5-cent rose in a 50-cent hole than a 50-cent rose in a 5-cent hole." That holds true of all material you plant.

Be sure to provide drainage. If you have hardpan or heavy clay, dig the hole deep enough. In certain places every hole must be dynamited to give drainage or the tree will not grow. A tree standing in water will not grow. It needs air, and if it stands in water, that excludes the air and as a result the tree dies.

Set the plant as deep as it stood in the nursery. Don't set it deeper. In digging a hole for a fair-sized tree, let's say the hole was made 3 feet deep. Then set the plant 1 inch deeper than it stood in the nursery and what happens? How many inches does a foot of filled soil settle? The engineers usually allow about an inch to the foot. All right, the plant then is set an inch deeper than in the nursery; it has at least 2 feet of dirt to settle and that gives it 2 inches more. After it settles it is 3 inches too deep when you finish, and after a few of them have died you will wonder why.

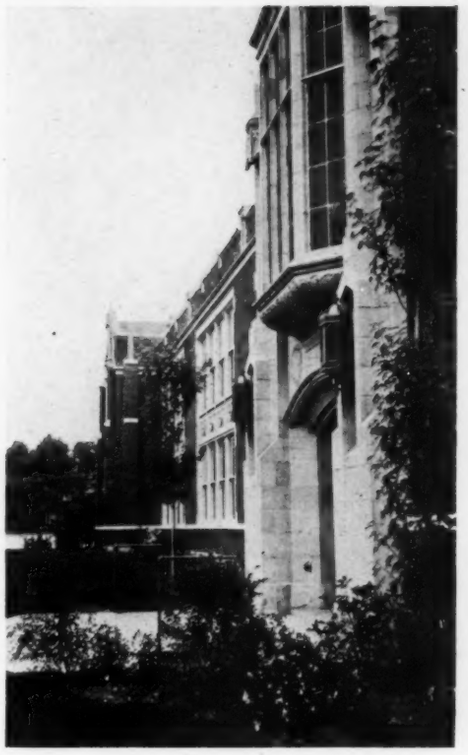
We usually find the roots in the upper 8 inches of the soil, the feeder roots at least, because that is the area in which the bacteria work that furnish the food, and if you plant them deeper than that they are working against themselves. If planted too deep, the roots are down where there is no food and little air available, hence they cannot get along so well and at the same time must also overcome the shock of transplanting.

If it is sand you are digging in, plant a little deeper than in heavy clay. Use good top soil to give the plant a quick start as it is usually rich. Build up a cone of soil in the bottom of the hole, set the plant on top of the cone and spread out the roots in the hole. Then take good soil and fill it in around the roots and as you fill it in, pack it firmly in between the roots to leave no air pockets. After that is done, tramp it thoroughly with your feet. A good way is to fill the hole one-half to two-thirds full and then water it—never let the roots get dry. In British India they have a saying, "If the roots see the sky the plant will die." Water thoroughly and throw in more soil and bring it up to the top. When you have it up there, step on it again. Then cup the top so it will catch the moisture. If you are going to cultivate throughout the season you can keep it that way; if not, mulch it at once.

When you plant shrubs there are a lot of old canes and some new ones coming from below. Be sure to cut the old stems clear out from the bush with pruning shears and leave only the young growth. The new growth will be vigorous and the results will be much more satisfactory.

Your Garden Grow?

By R. R. ROTHACKER



Always plant vine roots about 3 feet from the building in order to escape the dry area formed by the overhang of the roof but let the tops come out at the foundation wall.

Evergreens are desirable for school grounds. Again dig a hole large enough. You have a plant with a lot of earth on it covered with a burlap bag. Put it into the hole and be sure to pack the soil so there are no air pockets, using a hose and water as you go along. Be certain that there are no strings or ropes around the main stem as they will cut into the trunk as it grows, sometimes killing the top. The burlap can be left around the ball of earth and roots as it will rot away in a few weeks' time. Don't pinch off buds on branches of evergreens when they are transplanted or their shape will be destroyed. It is a good idea to get the habit of watering evergreens once a week. Be sure that the ball gets plenty of moisture through the growing season, particularly during the latter part of the summer, until the roots come out of the ball and become well established.

Let us think a minute about planting vines. Many times around the school building plaster and trash will be dumped next to the wall. Plants will not grow well in this. Be sure that good soil is placed where you are going to plant. Always plant the vine roots about 3 feet from the building in order to escape the dry area formed by the overhang of the roof, but let the tops come out of the ground at the foundation wall.

Do not cut the center or leaders out of a shade tree or you will spoil its form. Don't cut every branch off; thin them out. Space the branches by taking some out, but leave the tree in its original form, reduced somewhat. Take care of bad crotches. Once in a while there will be three or four branches that come out at one place and when they get large, a storm is likely to break them off. If you take care of this when the branches are small by leaving perhaps only one branch at that point, that will strengthen the tree. All that it may be necessary to do when the

Better to plant American elms, maples or native trees that will stand the climate. They may be a little slow growing but they will be there for others to enjoy for generations to come.

Many times around the school building plaster and trash are dumped next to the wall. Plants will not grow in this. Be sure that good soil is placed where you are going to plant shrubs.

branches get large is to put on a brace. When you get into tree surgery it is best to have some trained person do this for you.

When a storm breaks off a tree, don't cut the old tree away unless you are sure it will not rejuvenate itself. Sometimes wind storms will tear the entire tops out of trees, particularly soft maple trees. By cutting back to the new wood, you can make these grow again and become beautiful trees. A Chinese elm grows very fast, but like all fast-growing things, it will not live very long. About the time that it gets to be a beautiful tree it will decay, and ice and sleet will crack it down. Twenty-five to forty years is the most to be expected of that kind of a tree.

Plant American elms, maples or native trees that will stand the climate. Of course, they will grow a little slowly but they will be there for generations to come. If you can, get the children interested in planting and looking after some of the trees and shrubs about the grounds.

In p r u n i n g, make all wounds smooth, flush and clean. In cutting off large branches, first make an undercut and then cut through from above. This will cause the branch to break off clean and not strip the bark as might happen without the undercut. If the wounds are more than 1½ inches in diameter, it is a good idea to paint them to keep out moisture and prevent disease from starting.

Many schoolhouses have shrubs that are beginning to look like a brush pile; for instance, lilacs or honeysuckle. There are many branches and shoots coming from the base at the ground. Many branches are old and dead. Each year cut out about one-fourth of the old stems. Then there are new shoots that are ready to grow if given half a chance. If all the old wood is cut out at one time a rush of new shoots results that grow rapidly and get matty. Therefore, take out only part of the old wood. Be sure to take out a branch on different sides so the new wood comes in properly spaced. This is a good way to treat any plant that suckers and grows from the base.

Pruning may be done at any time, but the best time is in the late spring just before budding, when you can see what you are doing. Shape your plant and then watch the new growth come in and you will be surprised to see how well the new plants look. Don't take all the suckers out from around the base, as they keep the roots cool and also feather the plant nicely to the ground.

Just a word about watering. Be sure that shrubs and trees go into the fall and winter with moist roots. Plants need moisture in winter as well as in summer. Be sure there is plenty of moisture and they will come through the winter better.

If insects attack your plants get some insect poison and spray them, stomach poisons for the leaf-eaters and contact poisons for the ones that suck as the plant lice do. Whenever you find little clusters of egg masses in white spots on trees during winter, they indicate worms to eat next year's leaves. If insects eat the leaves a second time in a single season the tree may die. Once in a while a bad case of plant lice develops. If they get too bad, spray with nicotine or tobacco.

In planting hedges it is wise to space the plants about 12 inches apart for a single row or 18 inches apart for a staggered double row. For a new hedge it is best to cut it off about 6 inches above the ground. The lower you cut it the better base growth it will make. Prune hedges carefully and at the right time. Keep the hedge square, or better yet, keep the top a little narrower than the bottom, so the sunlight will get to the lower leaves. The leaves must have sunlight or they will die out. In that way you can keep a neatly trimmed hedge with foliage to the bottom.

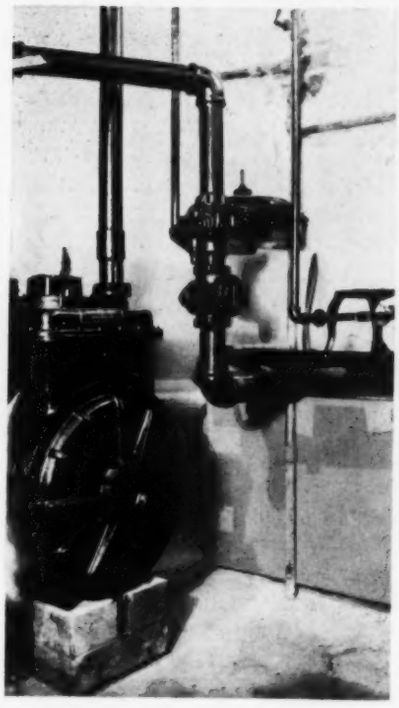
Good Tools Are Needed

Use good tools. Get steel-handled ones as the wood ones crack and break. A good pair of pruning shears, long handled lops and a good pruning saw are about all the tools needed on a school job. If you have trees, you will need a larger saw, and paint to protect the wounds.

Keep in mind proper planting, proper pruning, proper cultivation, care for insects as they come along, and see that your plants have plenty of moisture — these are the fundamentals of the care of trees and shrubs about the school grounds.

Gas for Heating

By LESTER B. ROBERTSON



Gas meter and gas pressure regulator at Guernsey High School, Guernsey, Wyoming.

THE choice of fuel should be governed in general by the most available local product and by the quality of service that may be expected. The steam heating plant at the Guernsey High School, Guernsey, Wyo., has been twice converted, from hand-fired to stoker-fired and from stoker-fired to gas-fired, this school being the first in the district to close a contract for heating with natural gas. The gas installation is working out well.

The high school was planned to accommodate approximately 350 pupils. It is a two-story brick building with a large gymnasium attached and a vocational shop detached, also heated by gas.

In the southeastern section of Wyoming, natural gas is as cheap as coal on the B.t.u. basis and offers many advantages as a fuel. It is a clean, dependable and automatic fuel which requires no moving parts to deliver its heat. Gas is an ideal fuel for trouble-free operation, as coal and ash handling and constant attendance to firing are eliminated.

Three Reasons for Change

Three factors may turn an existing system into a change-over prospect: heating satisfaction may be low, fuel cost may be high and wear and tear and constant attendance may force consideration of new equipment. The important monetary consideration to our board of education was the ratio of saving to the cost of making the transfer. An engineering survey of the entire heating system was made to determine in detail what change in equipment would be necessary and what the cost would be. If a change were made, would the cost of such a conversion bring a substantial return on the investment by an annual fuel saving? Would the fuel specified for purchase be adapted economically to the furnace in which it was to be burned? What further use could be made of the coal storage space?

The coal storage room, 18 by 24 feet in size, was decorated and made into a school museum. Today it houses one of the finest historical relic collections of the state.

The heating plant consists of two steam low-pressure boilers with a total rating of 15,000 square feet of steam radiation. They are of the cast-iron sectional type. Standing radiation throughout the entire building amounts to 3,739 square feet. In addition, there is 2,500 square feet of radiation for heating incoming fresh air used for ventilation. The fresh air is supplied throughout the building by air ducts built into the walls.

How Temperature Is Controlled

Excess air is removed from the rooms by another system of wall ducts and is exhausted to the outside by means of roof vents. Incoming air is heated to a temperature of 68° F. by special radiators while classrooms are heated to a temperature of 72° F. through standing radiation. The schoolroom temperature is controlled automatically by a master thermostat located at a mid-section of the building.

Forty-five gas burners were installed in the boilers, these being small cast-iron boxes, 2 by 4 by 8 inches high, grouped together to make one large bed of blue flames. Each burner consumes about 50 cubic feet of gas per hour when in operation. Gas and primary air are introduced into the bottom of each burner and, after thorough mixing, burn through slots in the top. A quarter-inch space is left between burners for secondary air, which is drawn through the lower section of the fire box.

The installation is made so burner heads are on the level with the former grate line of the boiler, the grates having been removed. The 45 burners occupy a central position at the front end of the fire box, with a 10-inch space between the burners and walls. The unit rests on a gas manifold and rack, with the venturi directly over the gas port. The rear of the ash pit is sealed off vertically by fire brick and cement within 12 inches of the burners.

The gas pressure for operating the system is taken from the low pressure side of the gas valve regulator. This pressure is reduced from a 250-pound pressure to 12 ounces, by the gas pressure regulator. The gas is supplied by a four-inch manifold and is served to the burners by a 1¼-inch pipe at a 2½-ounce pressure.

Protects From Boiler Damage

Steam heating systems are subject to the danger of insufficient water within the boiler. A broken pipe or cracked fitting, a defective water feeder, or the interruption of the water supply, all are frequent causes of great damage to unprotected boilers. The low-water cut-off reliably protects the boilers, stopping the burners by breaking the electrical circuit when the water level becomes low enough to endanger the boilers.

Another safety control is the motor gas valve. When current is supplied to the motor on a call for heat, the motor revolves and by means of a train of gears, lifts the plunger of the valve seat. When the motor reaches a full open position, a stop on the rack shaft stalls the motor. Then as long as the current is continued, the motor holds the valve in an open position. When the current supply is turned off, a helical spring on the rack shaft pushes the plunger to a closed position against the seat of the valve, revolving the motor backward through a train of gears. In brief, when current is supplied, the valve opens and remains open; when the current is shut off or discontinued for any reason, the valve automatically returns to a closed position, shutting off the gas.

Safety to the furnace or boilers from dangerous overheating is assured by a pressure control. When the steam pressure arrives at 2½ pounds on the steam gauge, the mercury tube switches by strain release causing a circuit, which closes the motor valve to the burners.

The winters in Wyoming are not as severe as many people suppose, as the low humidity modifies the chilling effect of the cold waves that sweep southeastward over the section and about three or four times each winter. The cold waves are usually of short duration and frequently break up into chinook conditions. The average annual temperature at this altitude of 4,800 feet is 46° F. Winds have a great effect on the amount of fuel burned. Careful and extensive tests carried on by the University of Illinois indicate an increase of 4 per cent in gas consumption, owing to winds.

The boilers in the Guernsey High School are in use from September until June and the total consumption of gas in this period averages 2,250,000 cubic feet (1,025 B.t.u.) at an average of 30 cents per thousand cubic feet. This amounts to $675. The coal consumption before the conversion averaged 148 tons per season. At $6 per ton, this amounts to $888.

Records of fuel consumption are of prime importance in determining whether the operation is at greatest efficiency or not, and are of little value unless they indicate when the heating system was operated in the most economical manner and when wastes occurred. Constant daily study is necessary on the part of the engineer to check the cause of high fuel consumption in order to stop any waste. A daily record is kept and recorded for operating purpose. When operation is economical a careful study is made of how it was obtained, so as to be able to repeat the performance.

Since no system operates at 100 per cent efficiency the unit fuel consumption figure is divided by the assumed or known plant efficiency. The standard degree-days for the southeastern section of the state of Wyoming, on the basis of 65° F., is 5,245.

Conservation Through Calking

THOUSANDS of dollars of expensive building maintenance have been saved through a timely job of repointing. This type of work should be carefully and thoroughly done by contractors who understand masonry pointing or the school's own mechanics, provided their work is carefully supervised by a competent representative of the material manufacturer.

The old mortar should be first removed to a depth of one-half inch in repointing joints. Projecting courses such as cornices, band courses, steps and sills should be raked out a full inch before repointing. Repointing should be done in dry weather on a dry surface, and the opening to be pointed should be completely filled. All joints should be at least one-quarter inch in width.

Neatness of a repointing job is important in preserving the original beauty of the building. A material should not stain or discolor the stonework adjacent to the pointing work. A material that will lose its oil content into the porous masonry will soon become hard and crack. Even when the work is to be let out on a contract basis, the contractor should be required to submit a sample of the material he is to use for approval. This may be tested in two ways: a simple test is to place some of the material on a blotter and expose it to the sun for a few days to detect any bleeding of the oils into the blotter; a better method is to inspect some building upon which the material has been used and in which the results of wear and weather may be seen after a year's service.

As long as the maintenance of a school building has to do with health, warmth and comfort, as well as the preservation of the building, calking and weather stripping will be factors in the maintenance of school buildings. Weather stripping and calking not only preserve the wood frame from rot, and steel sash from rust and corrosion, but they perform other important functions in addition: (1) they save fuel by reducing the amount of cold air necessary for the boilers to heat; (2) they increase the comfort and healthfulness of a building by sealing a common source of drafts and dampness, and (3) they reduce interior redecorating costs by shutting out soot, dust and dirt which cause crow's feet on the walls and dirty smears around the windows and doors. Interior painting is costly and any investment that will make an interior paint job last longer is well worth while.

Many school buildings have had trouble with water leakage through a masonry wall. Such leakage must be quite severe before it will appear on the inside of a building. The difficulty occurs usually through brick walls or through walls of rough stone in which larger mortar joints are common. This problem is one of the most difficult and expensive to solve because it is necessary to use a transparent material to preserve the exterior appearance of the building.

Transparent or invisible dampproofing materials will not seal cracks or holes in a masonry wall. They are made to seal the porosity of brick, stone, concrete or other masonry but not to seal cracks. Cracks first must be pointed. Transparent dampproofings are therefore of value on a wall that either does not require pointing or has been thoroughly pointed.—*From Oregon Manual on Construction and Care of School Buildings.*

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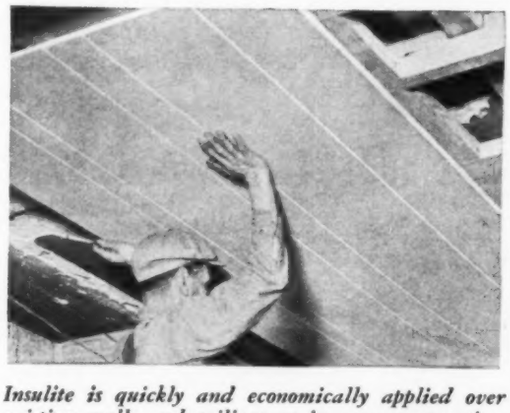

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New Furniture for Old

Now that school doors are open again it is plain to be seen that custodians spent a busy but profitable summer, just as we reported during last July and August. Scarcely a department that does not show some sign of renovation.

Among many improvements made to the school properties at Yoakum, Tex., was the job of refinishing furniture. All the work was done by the school board's own janitors. But more about that later. Right now it may be said that several hundred desk tops were made like new, not to mention thirty cabinets, a number of chairs and miscellaneous items of furniture from all the buildings of the district—this on the good authority of George P. Barron, superintendent.

All in Knowing How

The solution of the problem of maintaining school furniture, according to Mr. Barron, rests with training the janitors for this type of work. "We make our inspections of school properties regularly," he says.

"Incidental repairs are made during the course of the school year as they arise, but the larger jobs of repairs and the renovation that is necessary from year to year are held over for the summer months when the janitors have an ample amount of time on their hands. If the janitor is properly trained and supervised, his loafing period can be converted into a period of profitable employment and the school plant can be made over into a place of beauty.

"Renovating school furniture is really a simple job requiring more of brawn than brain. Equipment necessary for the task is small and the costs, aside from labor, are nominal as compared with results obtained. For the usual work of renovating school desks, chairs and tables, a few woodworking tools, a portable sanding machine and a little plastic wood will be all that will be needed to prepare the surface.

"When the surface has been made ready for the finish, wood filler, properly applied, wood stains mixed to the color desired on the job, some shellac and varnish will give the appearance of new furniture. But the tools can't just be turned over to the janitor with instructions to proceed. Disaster will follow.

"The janitors should be brought together in a central work shop and be given a demonstration of each step to be taken in getting the wood ready for a finish and in finishing. Following the demonstration by the superintendent, a period of supervised practice must come in which the supervisor is meticulous in seeing that all instructions are carried out to the letter.

"With the pride that arises from a well-finished job, the janitors will go forward to the task at hand with a desire to make each desk just a little better than the one finished before. In the end, you will think you have with you a bunch of skilled cabinet makers and finishers rather than the lazy janitors you have known.

"As a usual practice, it is better to set up a work shop in one of the schools and have the smaller items to be refinished brought to the central point, for better results will be obtained if supervision is continued throughout the period of the work.

"When the work was first started, not one of our janitors knew the first principles of woodworking or of wood finishing. Through careful demonstrations and a long period of supervised practice, skill was attained that enabled them to do a first-class job. From the wrecks brought forth, desks as good as new in strength and in appearance have been made. With the old finish removed and the initials cut out, many beautiful grains were discovered.

"The janitors took special delight in picking out all of the tops made of bird's-eye maple and saving them for a natural finish. Two schoolrooms are now furnished with desks with bird's-eye maple tops, finished in the natural color, replacing the conventional schoolroom brown. Through a variation of the finishes used on the desk tops, each room now possesses a distinct personality.

"Our work of training janitors has only begun. We plan to start a school for janitors under the trade and industrial set-up where instructors may be employed to give technical instruction in other arts that will serve the janitor as well as the chief custodian of the school plant.

"We shall invite janitors from nearby towns and cities to take this course along with those of our own school, to the end that there may be better plant practices in the schools throughout this area."

Uniform Makes the Job

Walls gleaming with new paint and attendants flaunting smart new uniforms show the hand of Dr. H. H. Linn, superintendent of buildings and grounds, who is gradually rejuvenating the plant of Teachers College, Columbia University, New York City. Doctor Linn is enthusiastic over what attractive uniforms will do in helping the morale of the personnel.

"Your custodian dressed any old way, most likely in an old torn shirt and frayed trousers held up by suspenders, too often handles his job any old way," says Doctor Linn. "On the other hand put him in a dark blue shirt with collar and bow tie and give him a belt to hold up his trousers and he takes himself more seriously—feels that his job really amounts to something!" Incidentally the bow tie is standard equipment instead of the more common four-in-hand, because it is safer, less likely to get caught in things.

One of Doctor Linn's most significant experiments has had to do with elevator operators. The men formerly employed to run the elevators dressed according to their own ideas, tastes and pocketbooks. The result was not esthetic, to say the least. Obviously disinterested in their personal appearance, they displayed a similar lack of thought in their work. Passengers were delivered safely from floor to floor; that is about all that could be said for the service.

Today smart looking girls greet you pleasantly as you enter the elevator. They are dressed in dark green uniforms and, as they swing the door shut, you note that they wear black kid gloves. The men have been transferred to other types of work.

Similar radical changes have taken place in the maid service. Those are not charwomen you see working along the corridors, but maintenance department employees — and proud of it. Again the influence of clothes — working clothes, designed for the purpose.

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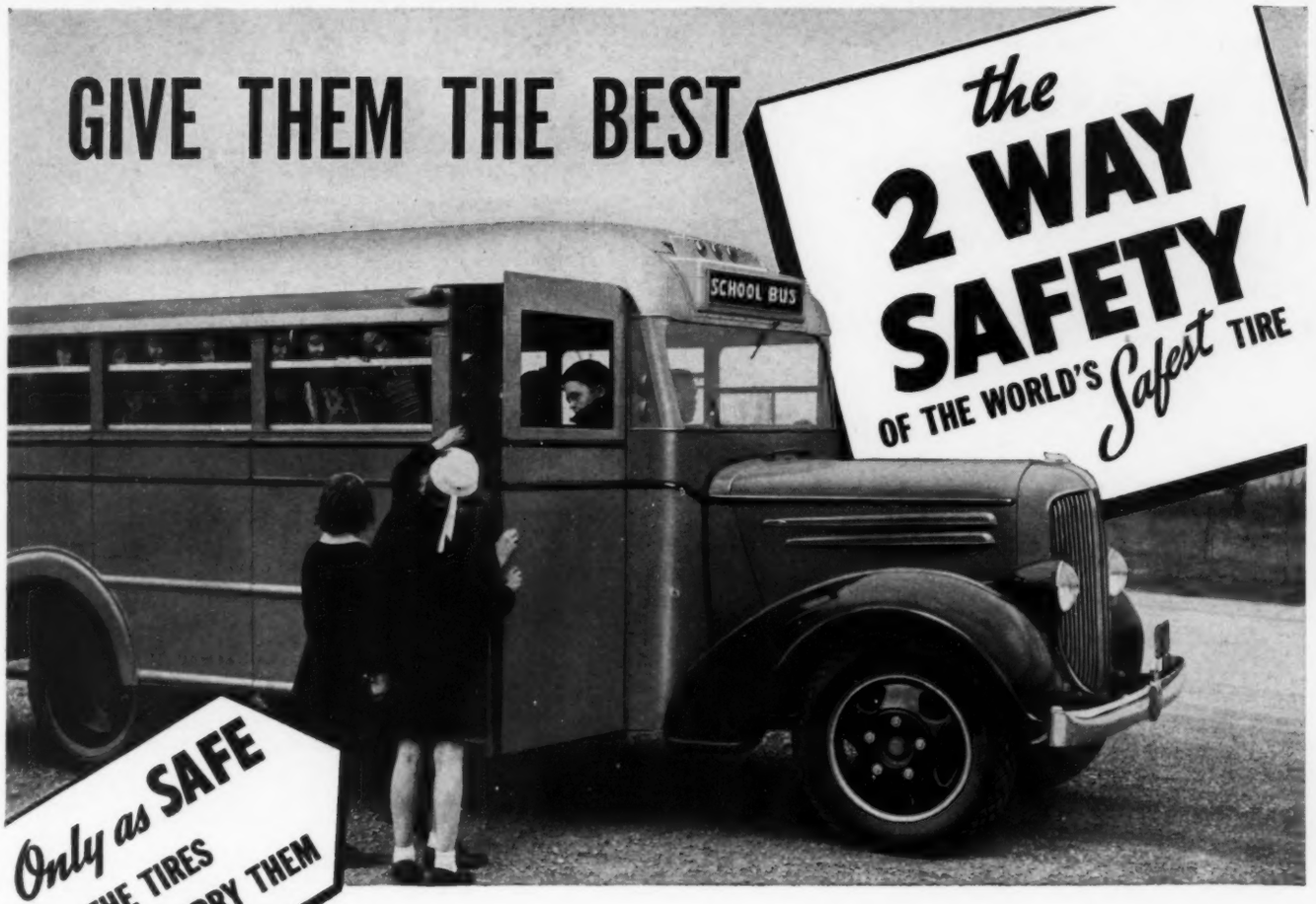

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Providence Provides Well

By HOWARD D. WOOD

PRIOR to 1921, there was no attempt by the officials of the school department in the city of Providence, R. I., to care for the adequate feeding of high school boys and girls at noontime. The regular procedure was for pupils to bring cold lunches from home and gather at noontime to eat, sometimes under none too desirable or hygienic conditions. The same condition prevailed in regard to teachers.

In the autumn of 1921, the school department, in conjunction with the parent-teacher association, opened a cafeteria at the Hope Street High School under the direction of Ruth Cummings, the present director of the cafeteria system in the public schools of Providence. Assisted by three women, the dietitian prepared and dispensed hot lunches, sandwiches, milk and ice cream to a majority of the 1,000 pupils then attending the school.

The success of the venture was so marked and public opinion was so thoroughly in favor of the undertaking that shortly thereafter cafeteria service was started in the other high schools by the school department without any financial backing from any other source. To date all have paid their own way without subsidy.

With the opening of junior high schools in the city the scope of the work has expanded rapidly. At the present time, including fresh-air and sight conservation rooms, there are thirty centers in the public school department where food is dispensed to children. From its humble beginning with one dietitian and three helpers, this service has grown into an organization consisting of a director, seven dietitians and approximately seventy full-time adult helpers.

In the organization of cafeterias in Providence, the school department from the start has assumed the responsibility of organizing and directing the service on a self-supporting and nonprofit basis. A committee consisting of three persons, the superintendent of schools, the secretary of the school committee and the director of the school cafeterias, maintains general supervision, determines policies and assumes the responsibility for the operation of this essential service. Each of the larger schools has a dietitian and corps of workers who prepare the food on the premises and dispense it to the pupils and teachers of the school.

A student council keeps this cafeteria at Roger Williams Junior High School neat and clean. Note acoustic treatment of the ceiling.

In the smaller schools, the food is prepared in the central kitchen and shipped to local schools in tight, sanitary containers. School department trucks are used for this service. Menus are prepared by the director and an effort is made to provide a varied, balanced offering at moderate cost. At no time is quality subordinated to cost. Only the best quality of foodstuffs is accepted, purchased through local dealers who have proved themselves to be dependable.

In the various schools there have been provided excellent facilities for feeding the children and teachers. The main cafeteria in the Roger Williams Junior High School is a modern, well lighted, airy room seating 800 pupils (half of the school enrollment). It is adequately equipped with sanitary drinking fountains and with several roving cans for the disposal of waste paper and surplus lunch. The tables are covered with tan colored linoleum, the flooring is red tile and the chairs are furnished with rubber tips. As a further aid in reducing excess noise, the ceiling of the room is sound treated.

At the side of the room there are several apertures, opening into the dishwashing room, where pupils dispose of their soiled plates, silverware and empty milk bottles. The room is equipped with radio loud-speakers, which are connected with the central panel board in the general office. During the lunch period radio programs and phonographic recordings are presented for the enjoyment of the children.

The counter arrangement is of particular interest. Pupils form into two files at either side of the cafeteria and pass in single file behind the long rails for sandwiches, which are wrapped in

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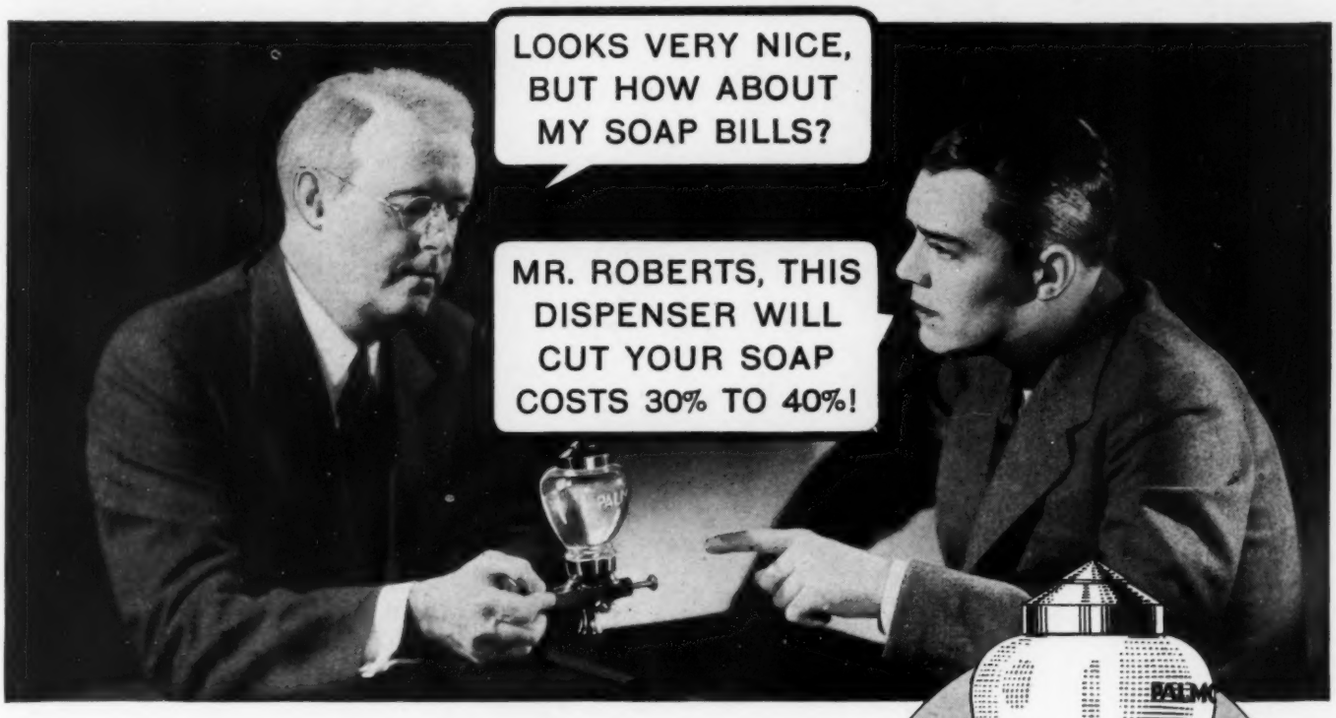

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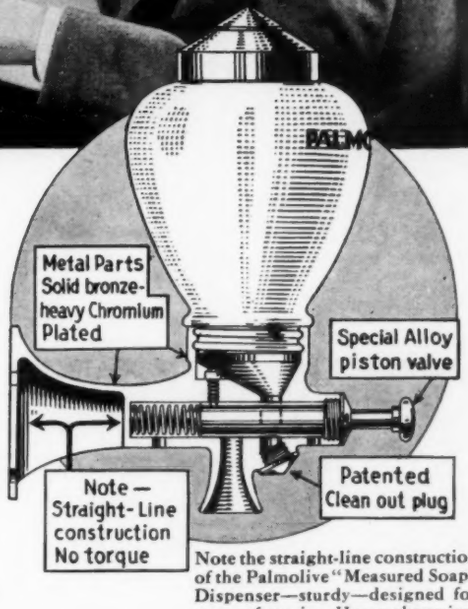
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Pupils file past the counter (above) to select their luncheon dishes. Those desiring milk are served at the small counter (below).

wax paper, or for hot plates, which consist of meat or fish and two vegetables. Soups are also dispensed from the same steam table. Those children desiring to purchase milk or chocolate milk only form a separate line and are served at the small counter shown in the foreground of the accompanying picture, thus facilitating the handling of large numbers of children in a minimum amount of time. Outstanding members of the school, known for honesty, are chosen by the dietitian from a list approved by the principal to serve as cashiers.

Hot plates are served by adult helpers; sandwiches, milk and ice cream by pupil helpers. All pupil helpers receive a complete luncheon consisting of soup, hot plate, milk, bread and butter and dessert in return for their service. All cafeteria workers, pupil or adult, must submit to a health examination and obtain a permit before being allowed to work in the cafeteria.

Counters are modern with metal surfaces and porcelain and tile siding. Dustproof cabinets for the storage of dishes and silverware are also provided. Desserts and unwrapped foods are displayed in glass cabinets. All utensils used in the steam table are of white porcelain.

The kitchen is similarly modern, food being prepared under the most rigorous standards of sanitation. Equipment includes modern electric mixers, gas ovens and refrigerators. A door leads from the kitchen to the storeroom where the reserve stock of staples is stored.

The dishwashing room is large and furnished with the best of equipment for caring for large numbers of soiled dishes. Every dish and piece of silverware is thoroughly washed and then subjected to live steam in the steam chest before being put into service.

The teachers in home economics and hygiene classes are constantly instructing children in the proper choice of foods and in the value of a balanced, wholesome diet. These teachers serve with the dietitian as a committee, meeting with the principal to study the problems of school health and to formulate plans for the improvement of the pupils' eating habits.

Considerable skill must be used by the dietitian in planning for meals. Racial differences, church holidays, weather changes, special school activities, neighborhood theater offerings, all challenge the dietitian. In general, about 10 per cent of the pupils buy hot plates, another 40 per cent purchase sandwiches, milk or ice cream. The rest of the children bring lunches from home, which they eat seated at the tables with those children who have purchased regular lunches. Candy is allowed to go on sale during the last ten minutes of the thirty-minute lunch period. Only those candies that possess proved food values are sold.

One of the most important features connected with a school cafeteria is the social attitude developed by the boys and girls of the school. In a large, cosmopolitan city school representing various social levels, one is sure to find varied food habits, desires and attitudes. In educating the children to more useful and happy lives, it is essential to develop those food habits that are acceptable to society and beneficial to the individual. We must also teach respect for the likes and dislikes of different persons.

There are two thirty-minute lunch periods at the Roger Williams Junior High School and this is typical of the Providence plan. Pupils must remain in the cafeteria during the first fifteen minutes to eat their lunches. During the remaining period they may go to the playground on pleasant days, returning to their tables in time for their dismissal from the cafeteria.

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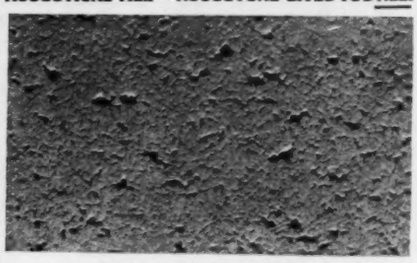

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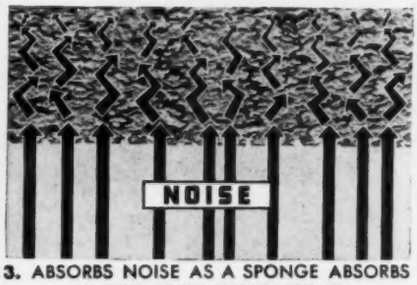

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Supervision of the cafeteria is a project of the student council at Williams Junior High School. At the beginning of the term the principal assigns to each room certain tables which it shares in alternate periods with another room. According to our program every room has a first lunch period part of the week. Pupils may be seated as they wish at their own table, but in accordance with a rule of the student council, every pupil must sit at the designated table every day.

Electric mixers, gas ovens and refrigerators make possible the preparation of food under the most rigid standards of sanitation.

The homeroom officers are charged with the responsibility for seeing that the tables are in satisfactory condition before pupils are excused to go to the playground or before the group is dismissed from the cafeteria. Children who are careless are invited to be more careful. If such practices do not result in the desired action, appeal may be made to the homeroom teacher who utilizes various devices to stimulate pride in the group and observance of the group requirements. As a general rule, the children have good success in coping with their problems by themselves.

Two teachers, one a class adviser and the other a hygiene teacher, provide the only direct faculty supervision of the cafeteria. These teachers are present during the lunch periods to expedite passing of lines and to stimulate groups by praise for improvement. At the end of each lunch period the hygiene teacher checks every table for cleanliness and orderly arrangement of chairs. Those rooms that have perfect tables receive one point of credit for each school day.

At the end of each week the results of the standing of every room in the school are printed in the school bulletin. At the end of each quarter of ten weeks, every room attaining a perfect score is awarded a prize by the student council. The presentations are made in the school auditorium.

Prior to the adoption of this plan, tables were often none too clean for the second lunch period groups. Now every room is striving to be one of the leaders. Homeroom teachers have taken an active interest in the appearance of the tables of their groups and many a teacher cuts a minute or two from his own lunch period in order to encourage the children to secure the coveted points. It should be noted that interest on the part of the teachers is a great factor in the success of the plan. That the plan is succeeding can be seen in the tremendous increase in the number of rooms securing perfect scores, 60 per cent making a perfect score during the last quarter ending in June.

Some may criticize this plan as one that rewards children for doing something that they should do anyway. Our feeling is that this is not a valid criticism. While these children are learning to do better those things which society demands, stimulation to success is necessary. Healthy rivalry between groups serves as one of the best motivating devices known and the tangible award goes a long way toward stimulation of pupils.

It is true that the younger pupils are more susceptible to the award than are the older ones. However, it is no longer necessary to look in a chair before sitting down or to offer apologies to visitors before entering the cafeteria. As a socializing and cultural force there is probably no other single influence in the junior high school that has such great possibilities as the cafeteria.

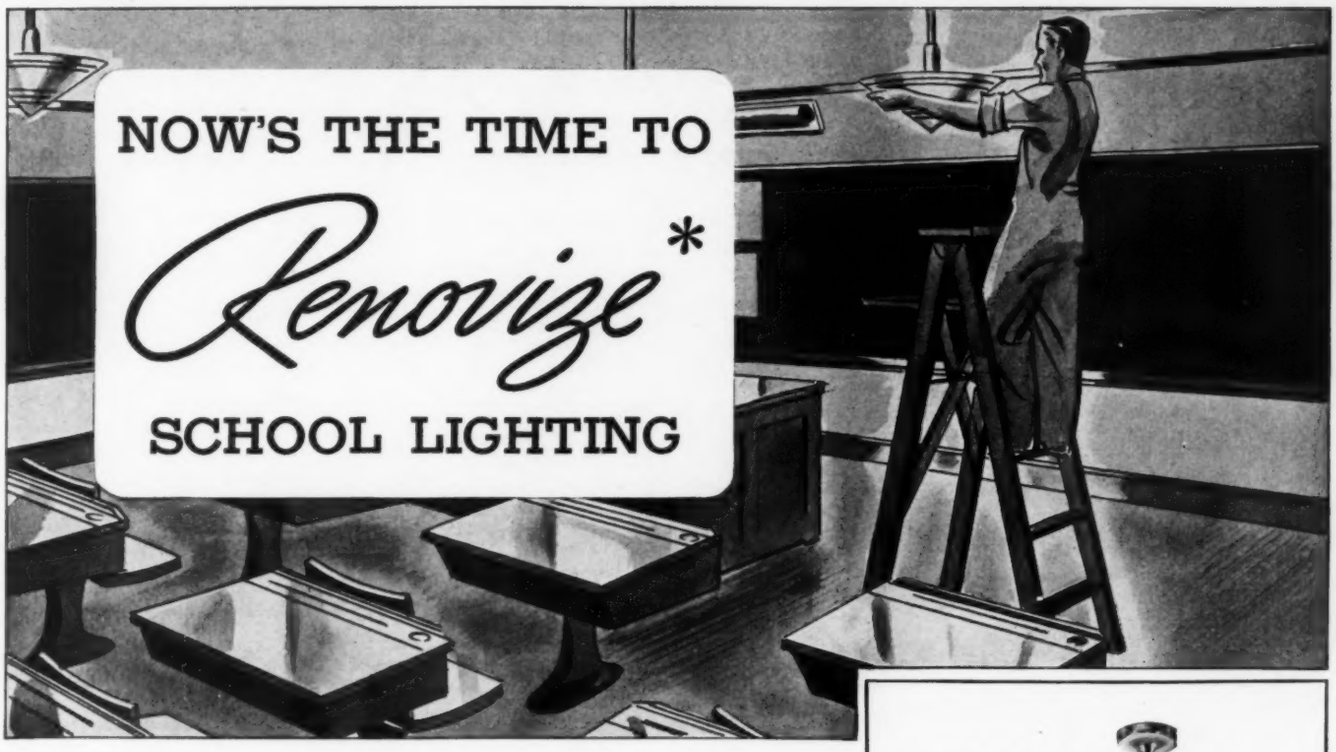
FOOD FOR THOUGHT

• Legal action to place the 700 Chicago school lunchroom employees under civil service rating on the ground that agitators are trying to organize them into a CIO union has been taken by the city's board of education. After Charles Fry, a school trustee, who also is business agent of the machinists' union, and F. O. Washam, lunchroom director, told the board of the efforts of the CIO organizers, President James B. McCahey of the board of education instructed the legal department to take steps to place employees under civil service.

• "Soldiers of Science," an educational health playlet, depicts the romantic and historical events which ultimately led to the discovery of vitamins A, B, C, D and G. It presents the struggles of scientists to unearth vitamin knowledge. Written by Ruth L. Hoesly for junior and senior high school pupils, it offers teachers material for classwork, for school programs and for parent-teacher meetings. A copy of "Soldiers of Science" will be sent gratis by the Wisconsin Alumni Research Foundation, Madison, to any junior or senior high school teacher upon request.

• The National Association of Public School Business Officials' convention, meeting in Baltimore, October 11 to 15, will have a section on its program devoted to school lunchroom management.

• That the way to the school patron's heart is through the school cafeteria was demonstrated at Enid, Okla., last year during American Education Week. Each day a civic club and the board of education lunched in the high school cafeteria, and an evening open house was begun with dinner in the cafeteria.



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**Renovize . . .* is a relatively new word, meaning to renovate, renew, replace, modernize. This term is especially applicable to School Lighting, which has not kept pace with the parade of building modernization generally.

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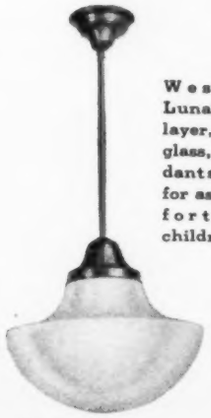

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NEWS IN REVIEW • • • •

Construction Council

The National Council on Schoolhouse Construction will hold its fifteenth annual meeting October 20 to 23 in Columbus, Ohio, with T. C. Holy of that city presiding.

E. L. Bowsher, Ohio state director of education, will give the welcoming address at the opening session Wednesday morning, October 20. The response of the convention to Mr. Bowsher's welcome will be given by W. F. Credle, director, division of schoolhouse planning, Raleigh, N. C., vice president of the council.

Following the reading of the treasurer's report by Ray L. Hamon, secretary-treasurer, of the Peabody College for Teachers, Nashville, Tenn., and the appointment of current committees, the convention will hear reports of liaison committees.

F. H. F. Halsey will report on the liaison with the Illuminating Engineering Society and the A. I. A. Francis R. Scherer will review work with the National Fire Protection Association; H. W. Schmidt that with the American Standards Association; Mr. Credle that with the United States Office of Education, and N. E. Viles the work with the National Association of Public School Business Officials.

To Report on Maintenance

The Wednesday afternoon session will be continued with business reports of the association. Reports of standing committees to be presented include those of the committee on operation and maintenance, Mr. Viles; the committee on state school plant administration, Mr. Holy, and the report of the executive committee of which Mr. Viles also is chairman.

Other members of the council's executive committee, which reports (1) qualifications for membership; (2) method of deciding time and place of annual meeting, and (3) new members, are Frank Williams of Oklahoma City, Okla., and George D. Coons, Albany, N. Y.

Dispensing with the association's business on the first day of the meeting, the convention will swing into sessions actually relating to schoolhouse construction on Thursday, October 21. Thursday morning will be devoted entirely to lighting problems, Friday morning to architectural planning, Friday afternoon to community planning, and Saturday morning chiefly to plant adequacy.

Among the lighting problems to be discussed at the Thursday morning session are: "Window Arrangement and Light Distribution," by Prof. W. W. Carpenter, University of Missouri; "Some Observations on Artificial Illumination of Classrooms," George D. Coons, New York state department of education; "Color Lighting and Acoustics of Classrooms," Doyt Early, California department of education; "The Glass Block Type of Classroom Lighting," H. W. Schmidt, Wisconsin department of public instruction, and "What Constitutes Adequate Classroom Lighting," W. G. Eckles, Mississippi state department of education. Hubert C. Eicher, director, Pennsylvania state department of education, will lead the discussion of various lighting problems following these talks.

Planning to Be Discussed

Mr. Halsey will preside at the afternoon session to be given over to the report of the chairman of the committee on standards, H. W. Schmidt, who is supervisor of buildings of the Wisconsin department of public instruction.

Dr. Arthur B. Moehlman, editor of The NATION'S SCHOOLS, and professor of education at the University of Michigan, will lead the discussion following the Friday morning planning session. J. W. Brooker of the Kentucky department of education will preside. Speakers at this session will include Raymond V. Long, Virginia state board of education; Don C. Rogers, Chicago board of education; A. G. Corbin, board of education, Yonkers, N. Y.; Guy E. Wiley, Milwaukee board of school directors, and M. L. Altstetter, educational specialist, Cooperative Study of Secondary School Standards.

Planning schedules for the needs of the community will be discussed by Thomas J. Higgins of the Chicago board of education at the Friday afternoon session.

Other speakers on this program are S. L. Smith, director for Southern schools, the Julius Rosenwald Fund, who will speak on beautification of rural schools; David H. Sutton, Ohio state department of education, who will summarize the study of local school units in Ohio, and Alice Barrows, specialist in school building problems, U. S. Office of Education, who will describe room layouts for libraries. J. L. Graham, Florida state department of public instruction, will lead the discussion.

Dean Henry L. Smith of the school of education, Indiana University, will be the banquet speaker that evening. His topic will be "The Schools of the Orient."

Prof. E. T. Peterson of the University of Iowa will lead the discussion at the final session Saturday morning, at which Mr. Holy will preside. Scheduled are brief speeches covering such topics as population and enrollment forecasting, by G. E. Irons, Cleveland board of education; the New London school disaster, by J. Fred Horn, Texas department of education; school plant adequacy in North Carolina, by Mr. Credle, and operation of swimming pools, by Francis R. Scherer, board of education, Rochester, N. Y.

Chicago Combats Paralysis

While Chicago's grade schools remained closed because of the disturbing outbreak of infantile paralysis in the Middle Western states, the city's 320,000 elementary school children began a course in home study through daily lectures broadcast by the board of education over six radio stations.

The city of Chicago had by far the most cases reported in the afflicted area during the first six weeks of the outbreak, 242 cases having been reported in the city alone. The city's suburbs were forced to follow suit by law enforcement and health authorities combating the spread of the disease. Schools in ten suburbs and country towns surrounding Chicago which had opened in early September were forced to close because of sharp increases in the number of paralysis cases.

Eight free dispensaries were opened in Chicago where specialists treated children between the ages of five and sixteen with a nasal spray designed as an experiment in the mass prevention of infantile paralysis, under direction of the board of health and the Laryngological and Otological Society.

Although it was thought possible that cooler weather would have some effect in the fight on the disease, Dr. Herman N. Bundeson, president of the Chicago board of health, said that it has not been shown conclusively that weather is a major factor.

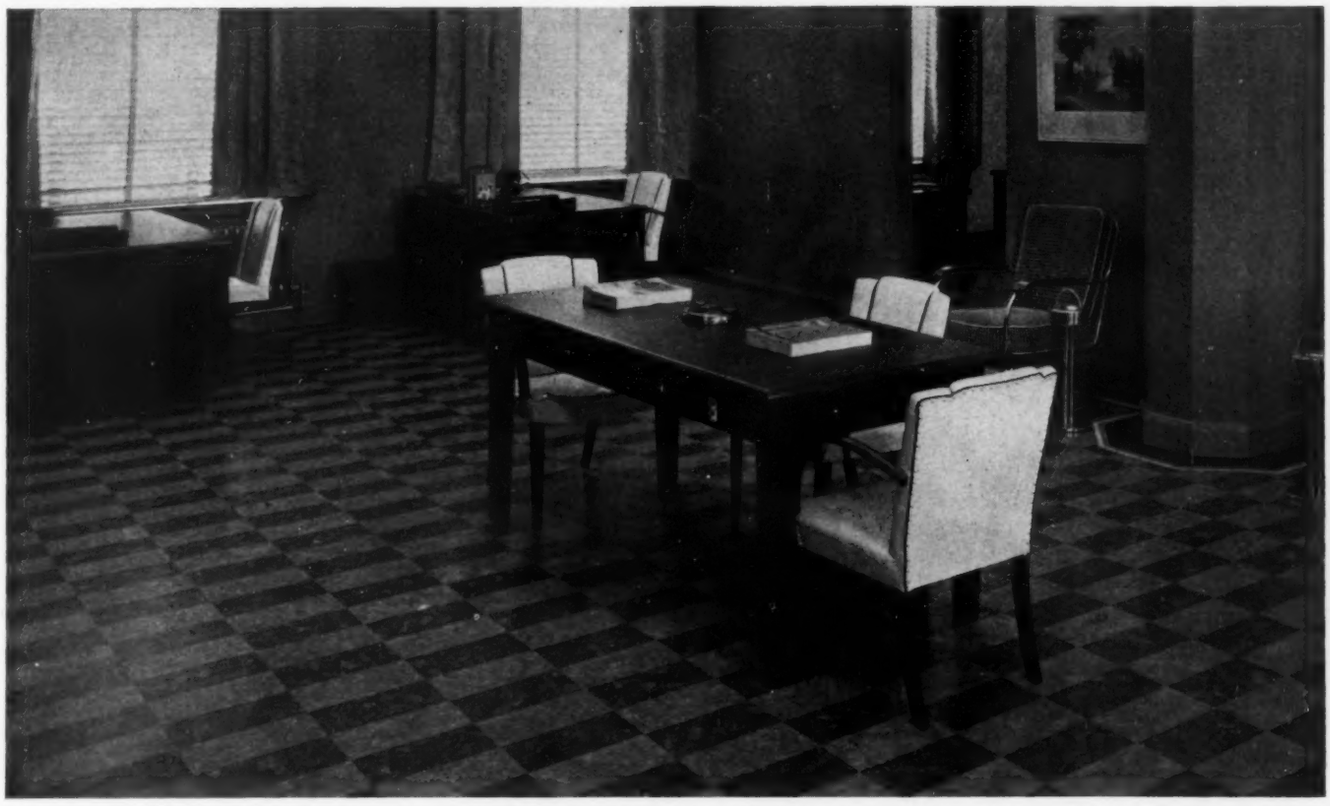
With no assurance that grade schools could be opened within a reasonable length of time, Dr. William H. Johnson, superintendent of the Chicago school system, rallied educational forces that pupils might review the previous semester's work to which the first few weeks of the schools are usually devoted. Chicago newspapers printed outlines of lessons for the various grades, and parents were advised to telephone the

A Publisher Takes the FLOOR

When plans were being made for the decoration of the offices of Philip Battelle, publisher of Western Home Furnisher magazine, it was agreed that an atmosphere of rich, modern simplicity would be most becoming. Quite naturally, a floor of Sloane-Blabon Custombilt Tile was chosen to contribute to the harmony of the entire room scheme.

Today, visitors who view these offices on the tower floor of the New Western Furniture Exchange & Merchandise Mart in San Francisco call them the showplace of the building. The splendid Bleached Mahogany and Indian Red tile colors, with six-inch Black Marble Border and one-inch feature strips of Plain Tan and White, combine to give a striking effect.

Quietness, cleanliness and comfort also are a part of this gratifying Sloane-Blabon installation. We invite architects, builders, managers and executives to consider the smart advantages of this type of resilient floor when planning to build or remodel. Write to us.



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board of education's bureau of curriculum for information on courses and reading.

Although paralysis control was wider at Chicago, the outbreak of the disease has created a serious problem in metropolitan areas of states from the Ohio Valley to Colorado. In many cities the opening of schools was delayed as a precautionary measure. Cleveland and Detroit postponed opening of schools, the decision to depend upon weather conditions. Milwaukee advised parents to keep children over seven away from school when it opened on September 8, younger children previously having been prohibited from attending school. Omaha deferred the opening of schools one week and Buffalo twenty days.

MEETINGS

Toward CIO Affiliation

At its 1936 convention the American Federation of Teachers went on record as being sympathetic to the CIO.

Meeting in Madison, Wis., August 23 to 27 for its 1937 convention, the federation took another forward step in the direction of CIO affiliation through a resolution providing for a referendum of the membership upon this question before Feb. 1, 1938.

The convention further instructed the executive council of the A. F. T. to study the "functioning, dues, contracts and autonomy of the CIO in its relation to labor," and the significance to the A. F. T. of the proposed affiliation with the CIO.

Keynoter at the convention was Wisconsin's governor, Philip F. LaFollette, who opened his speech on "Academic Freedom and Tenure" by asking if it is not vital to determine whether free speech is a special privilege or a right granted to individuals as a whole or to particular groups in specialized occupations.

John G. Rockwell, Minnesota state commissioner of education, and Stanley F. Atwood, Washington state superintendent of public instruction, upheld democratic school administration in speeches before the convention.

Prepare First Convention

To form an organization for interchange of ideas among school lunchroom directors, cafeteria managers from representative public school systems throughout the country will convene November 11 to 12 at the Hotel Morrison in Chicago for the first annual convention of the National School Cafeteria Association.

Heading the committee on constitution and by-laws is Mrs. Bena Hoskins, cafeteria director of the public schools of Fort Worth, Tex. George Mueller, assistant secretary, school district of Kansas City, Mo., and Berma Jarrard, cafeteria director, board of education, Atlanta, Ga., are serving with Mrs. Hoskins on this committee.

Claire H. Vander Voort, secretary-treasurer of the new association, and F. O. Washam, director of Chicago school lunchrooms and chairman of the association's organization committee, are in charge of the convention.

One-Day Custodians' Schools

One-day training schools for Iowa's building custodians and assistants will be held this fall in four of the state's high schools. Custodians may attend the school at Harlan on September 25; at Knoxville, October 2; Algona, October 16, and Elkader, October 23, all of which are located at strategic geographical points. Last June custodians from Iowa schools attended the fifth annual custodian training school sponsored by the engineering extension service of Iowa State College.

ADMINISTRATION

Boycott on Milk

Protesting against the minimum price set by the New Jersey board of milk control for milk consumed in schools, the Orange board of education has suspended temporarily its ten-year practice of allowing milk to be served in the classrooms. Six dairy companies have submitted bids asking 4¼ cents a half-pint, the minimum allowed by the milk control board for distribution of Grade A to schools.

The school board's attitude was said to be indirectly related to the fact that Supt. W. Burton Patrick's last annual report showed nearly one-third of the average enrollment of the city's schools, or 2,060 pupils, suffered from malnutrition. Superintendent Patrick asserted that the Orange schools deserved better price treatment because of the number of poor pupils in the system.

Equipping for Industry

To equip public school pupils for participation in the industries of Kalamazoo, Mich., the city school system inaugurated a new four-point program beginning in September, according to Supt. Loy Norrix. The distributive occupational program follows that outlined under provisions of the Michigan state plan for vocational education.

The program includes (1) teaching of a retail sales course, the pupils in the course to include part-time pupils who actually are engaged in distributive occupations; (2) an apprenticeship training program; (3) a placement bureau for graduates and for pupils who necessarily leave school before graduation that will operate during the entire year and will follow up all placements, and (4) a complete vocational survey preliminary to the whole program. Modern demands of business must be known before instruction in this program can be effective, Superintendent Norrix said.

Record Oral Interviews

Recording machines are being used this fall in testing applicants for high school teaching positions in the New York City system. Plans are now being worked out, Dr. Joseph K. Van Denburg, chairman of the board of examiners, disclosed, to record the oral interview which is part of the examination. This will go into the applicant's permanent file.

Many teachers had complained they were denied licenses for "trivial" or "unfair" reasons. With recording machines in use, complaints against examiners may be analyzed in an impartial way. In doubtful cases, Doctor Van Denburg said, the entire membership of the board would be the final judge of the candidate's fitness to teach.

By showing candidates that they make mistakes in pronunciation and enunciation, the recording machines may become a factor in elevating speaking standards of the city, Doctor Van Denburg asserted.

No Stone Unturned

Junior and senior high school principals of Sioux City, Iowa, are making a careful survey of the pupils who have not returned to school this fall. Supt. L. W. Feik's objective is to make certain that every child who was in school last year and was not graduated from high school shall have opportunity to continue his school career. Each principal filed removal and nonattendance reports at the superintendent's office during the first few days of the school year.

LEGISLATION

Pennsylvania to the Fore

The Pennsylvania general assembly has enacted three momentous measures for teachers. The new legislation includes (1) one of the most liberal of school tenure systems; (2) a sabbatical leave law, and (3) provision for teacher pay increases in school districts of the fourth class (population less than 5,000) that will raise the average salary from $798 to $898 a year.

Important provisions of the tenure act provide that (1) contracts are to be in writing; (2) dismissal notice must be presented sixty days before the close of the school term, must contain a detailed

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statement of charges upon which the dismissal is based, and must provide a hearing to the employee who wishes to contest it, and (3) the only valid causes for termination of a contract are immorality, incompetency, intemperance, cruelty, wilful and persistent negligence, mental derangement, persistent and wilful violation of the school laws of the commonwealth, or a substantial decrease in the number of pupils.

Discredits Rumors

Discrediting statements that the new Pennsylvania teacher tenure law has ruined all chances of college graduates to find teaching jobs, Theodore A. Siedle, director of the teachers appointment bureau of the University of Pittsburgh, recently pointed out that already 49 per cent of the 224 graduates from the school of education are employed as teachers.

"Unscrupulous rumor spreaders have been throwing a fright into conscientious young people who are seeking teaching jobs," Mr. Siedle declared.

INSTRUCTION

Three-Day Exposition

Approximately 71,000 square feet of floor space of Buffalo's armory will be devoted to displays from the city's public schools at the large three-day school exposition October 28 to 30. This display space does not include commercial displays or the center platform.

The city is being zoned, since the dates of the exposition run concurrently with those of the Erie County Teachers' Conference and the convention of the New York State Teachers of the Western Zone. Patrons of the various sections are being asked to attend the exposition at different times on various days to avoid congestion.

Education Week

American Education Week will be observed this year from November 7 to 13, with "Education and Our National Life" as the point of emphasis. The suggested outline of themes for the week are as follows: Sunday, "Can We Educate for Peace?"; Monday, "Buying Educational Service"; Tuesday, "The Horace Mann Centennial"; Wednesday, "Our American Youth Problem"; Thursday, "Schools and the Constitution"; Friday, "School Open House Day," and Saturday, "Lifelong Learning."

Maude Adams at Stephens

Maude Adams, the Peter Pan of yesteryear, assumed the chair of professor of drama at Stephens College in September. President James Madison Wood said the college's arrangement with Miss Adams provided only a three-month connection, but that out of it he hoped for a lasting association and foundation of the Maude Adams School of Drama.

PERSONNEL

Payroll Increase Affects 440

A schedule of automatic increases in salaries for teachers with continued service has been put into effect in East St. Louis, Ill. The total payroll increase of $26,700 will affect 440 teachers next year.

Under the new schedule elementary and junior high school teachers will start at $1,000 a year, with $50 annual increases after two years, reduced to $25 in the seventeenth year. The maximum for those lacking bachelor degrees will be $1,825 and for those with bachelor degrees, $1,900. Teachers in the ninth grade junior high school, senior high and supervisors will start at $1,200, with $70 annual increases after two years, reduced to $50 in the twentieth year. The maximum for those lacking degrees will be $2,250; for those with bachelor degrees, $2,240; for those with master's degrees, $2,640. The maximum for elementary school principals is $3,250 and for high school principals, $3,500.

N. Y. C. Increases Staff

With 307 more teachers in the New York City school system than last year and with an expected net drop in enrollment of 6,400 pupils, Dr. Harold G. Campbell, superintendent of schools, has pointed out that this situation will mean smaller classes in elementary schools and more special classes for physically and mentally handicapped children. In the junior high, senior high and vocational schools registration has increased and more teachers have been assigned to these divisions, he said.

GIFTS

Leaves Art Museum to State

A museum of art valued at many millions of dollars and the home of the late John Ringling have been presented to Florida and accepted by the state in behalf of the two institutions of higher learning, the University of Florida and the Florida State College for Women. The John and Mable Ringling Museum, opened in 1931 at Sarasota, constitutes one of the most valuable collections of architecture, sculpture and painting in the United States. For years prior to his death in 1936 John Ringling spent much time and a large part of his fortune in constructing the museum, which will provide exceptional laboratory advantages for students of art.

Establishes Scholarship

One-fourth of the estate of the late Ralph Isham, former Chicagoan, will go to the University of Chicago for the establishment of a scholarship and salary fund. No estimate was placed on the value of the estate, but it is believed to be several million dollars.

RADIO

Radio Conference

The second National Conference on Educational Broadcasting will be held at the Drake Hotel in Chicago, November 29 to December 1.

In addition to the eighteen organizations which sponsored the first conference last year the following have been selected to sponsor the second, to increase the scope of the social and cultural interests that will be represented on a nationwide basis: American Association for the Advancement of Science, American Association of Museums, American Association of University Women, American Federation of Arts, American Library Association, American Public Health Association, Music Educators National Conference, National Council of Parent Education, National Federation of Music Clubs and the National University Extension Association.

The American system of broadcasting, an evaluation of broadcasting from the point of view of the listener, educational broadcasting, and the future of radio have been selected as the topics of the four general sessions. Speeches on these subjects will be made by prominent representatives of education, the radio industry and the listener, and will be followed by periods of open discussion.

To give the conference unity and continuity, Dr. Lyman Bryson of Teachers College, Columbia University, has been designated as leader of all the discussions that follow the general sessions.

Dr. George F. Zook, president of the American Council on Education, will again act as conference chairman.

Southern Radio Institute

While Dr. B. H. Darrow, founder and director of the Ohio State School of the Air at Columbus, was a visiting professor on the summer faculty of the University of Texas recently, he sponsored a one-day radio institute on the campus at Austin under the auspices of the university extension division. Sample broadcasts, talks on radio in the classroom, reports of radio education activities in other states and countries and an address by a radio station executive were

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highlights of the program. Numerous agencies, including the Texas Congress of Parents and Teachers, the State Department of Education, the State Federation of Women's Clubs, and the State Teachers' Association also cooperated in the project.

Sharing Time

Kentucky high schools this year will have opportunity to share in weekly radio dramatic performances from the University of Kentucky broadcasting studios in Lexington. Invitations are being extended through the University High School, which fosters radio dramatic performances each year along with its regular stage dramatic performances. Each high school dramatic group accepting the invitation will be expected to bear its own expenses for the trip.

Forewarned

"What Every Freshman Should Know," a program designed to help this year's college freshmen, was presented in early September over the NBC blue network. Two college sophomores, a girl from Boston University and a Harvard man, told freshmen how to greet the superior sophomores; how to dress for campus life, and sundry other items of importance such as where to buy second-hand books.

HEALTH

Facilities for Deaf

To improve care of deaf children, Gov. Herbert H. Lehman of New York State has appointed seven of the thirteen members comprising a temporary state commission, created by the last legislature. The other six members of the commission are members of the legislature. The commission is specifically authorized to examine, report on and recommend measures to improve facilities for the care of hard of hearing and deaf children and children liable to become deaf.

The governor's appointees include: Dr. Edward S. Godfrey, Jr., state commissioner of health, and Dr. Frank P. Graves, state commissioner of education, ex officio members; Dr. August J. Hambrook, Troy, chairman of the committee for deaf and hard of hearing of the state medical society; Estelle E. Samuelson, executive secretary of the New York League for the Hard of Hearing, Inc.; Dr. Emily A. Pratt, supervisor of eyes and ears, state education department; Dr. Edmund Prince Fowler, director of research and clinics, New York League for the Hard of Hearing, and Capt. Victor Skyberg, principal of the New York School for the Deaf.

BUILDINGS

WPA Demands Refund

WPA officials have demanded refund of $24,000 of federal funds used to build a high school in Ellisville, Miss., because local authorities leased the building to a hosiery manufacturer who employed the pupils at $4 a week. The WPA administrator for Mississippi has been instructed to see that the government gets its money back.

When five Mississippi towns applied to the WPA for funds to build schools for manual training education about two years ago, WPA Administrator Harry L. Hopkins received word indicating that the buildings, which would have been constructed largely with federal funds, were to be used for private industrial production. He canceled allotments to all the towns except Ellisville, because local authorities assured him the structure would be used only for educational purposes. Recently WPA officials learned that Ellisville authorities had placed the high school at the disposal of a hosiery manufacturer who was employing pupils in the factory.

Tufts College Campaign

The sum of approximately $2,000,000 is being raised by Tufts College, Boston, for erection of a new medical school building. The new school building will be located at the New England Medical Center.

Denounces Closed Grounds

Denouncing as scandalous the fact that school recreational facilities are closed to the general public outside of school hours, Robert Moses, park commissioner of New York City, has taken up the matter with the board of educa-

Coming Meetings

Oct. 1-2—Secondary Study Conferences, Progressive Education Association, New York City.

Oct. 7-8—Michigan Educational Association: Region 5, Alpena; Region 7, Sault Ste. Marie.

Oct. 7-9—Vermont State Teachers' Association, Rutland.

Oct. 11-15—National Association of Public School Business Officials, Baltimore.

Oct. 14-15—Michigan Education Association: Region 2, Flint; Region 3, Jackson.

Oct. 14-15—Minnesota Education Association: Northeast Division, Hibbing.

Oct. 15-16—Regional Conference, Progressive Education Association, Los Angeles.

Oct. 18-29—Washington Education Association; Wenatchee and Yakima, Oct. 18-19; Spokane and Walla Walla, Oct. 21-22; Bellingham and Tacoma-Seattle, Oct. 25-26; Aberdeen and Vancouver, Oct. 28-29.

Oct. 20-23—National Council on Schoolhouse Construction, Columbus, Ohio.

Oct. 21-22—Indiana State Teachers' Association, Indianapolis.

Oct. 21-22—Michigan Education Association: Region 6, Detroit; Region 8, Battle Creek.

Oct. 21-22—Minnesota Education Association: Central Division, St. Cloud; Northern Division, Bemidji; Southeast Division, Winona; Southwest Division, Mankato; Western Division, Moorhead.

Oct. 21-23—Utah Education Association, Salt Lake City.

Oct. 25-28—National League to Promote School Attendance, Chicago.

Oct. 27-29—North Dakota Education Association, Minot.

Oct. 27-30—Nebraska State Teachers' Association: District 1, Lincoln; District 2, Omaha; District 3, Norfolk; District 4, Grand Island; District 5, Holdrege, and District 6, Scottsbluff.

Oct. 28-29—Maine Teachers' Association, Portland.

Oct. 28-29—Michigan Education Association: Region 4, Grand Rapids.

Oct. 28-30—Michigan Education Association: Region 1, Detroit.

Oct. 28-30—Regional Conference, Progressive Education Association, Chicago.

Oct. 28-30—Rhode Island Institute of Instruction, Providence.

Oct. 28-30—Wyoming Education Association, Thermopolis.

Oct. 28-30—Colorado Education Association, simultaneous meetings at Denver, Grand Junction and Pueblo.

Oct. 28-30—Montana Education Association: Western District, Kalispell; Southwestern District, Butte; Eastern District, Miles City; North Central District, Great Falls.

Oct. 29—Connecticut State Teachers Association, simultaneous meetings at Hartford, Bridgeport and New Haven.

Nov. 4-5—Arkansas Education Association.

Nov. 4-6—West Virginia Education Association, Clarksburg.

Nov. 4-6—Iowa State Teachers Association, Des Moines.

Nov. 5-6—Food Service Directors Conference, Boston.

Nov. 5-6—Kansas State Teachers Association, simultaneous meetings at Lawrence, Manhattan, Dodge City, Hays, Parsons and Wichita.

Nov. 11-12—National School Cafeteria Association, Chicago.

Nov. 12-13—Regional Conference, Progressive Education Association, Ann Arbor.

Nov. 12-13—Arizona Education Association, Tucson.

Nov. 12-15—New Jersey State Teachers' Association, Atlantic City.

Nov. 14-17—Association of Land Grant Colleges and Universities, Willard Hotel, Washington, D. C.

Nov. 17-20—Missouri State Teachers Association, St. Louis.

Nov. 18-19—Delaware State Education Association, Wilmington.

Nov. 19-20—Louisiana Teachers Association, Shreveport.

Nov. 19-20—Regional Conference, Progressive Education Association, Philadelphia.

Nov. 21-24—South Dakota Education Association, Sioux Falls.

Nov. 22-23—New York State Education Association, house of delegates, Jamestown.

November (Thanksgiving Week)—Virginia Education Association, Richmond.

Nov. 25-27—Texas State Teachers Association, Houston.

Nov. 26-27—Idaho Education Association.

Nov. 29-Dec. 1—National Conference on Educational Broadcasting, Chicago.

Dec. 2—Regional Conference, Progressive Education Association, Springfield, Mo.

Dec. 3-4—Regional Conference, Progressive Education Association, Tulsa.

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tion. A tremendous demand for playgrounds, particularly in congested districts, was pointed out by Commissioner Moses, who lambasted "the inertia, red tape and bureaucratic traditions of the education department and the janitor-custodian racket."

Constructs Cautiously

The new school building at New London, Tex., to cost $300,000 will be constructed without any dead air space under any portion of the building. Preston M. Green, Fort Worth architect, has completed plans for a two-story building of Spanish design.

NAMES IN NEWS

City Superintendents

DR. RALPH E. DUGDALE, for twenty-four years principal, supervisor and superintendent of schools at Toledo, Ohio, has been named superintendent of schools at Portland, Ore., succeeding CHARLES A. RICE, retiring superintendent, who has served the Portland city schools for more than twenty-five years.

DR. R. E. OFFENHAUER, former superintendent of schools, Lima, Ohio, has been named president of the Bowling Green University, Bowling Green, Ohio, succeeding DR. HOMER B. WILLIAMS, retiring president, who has been named president emeritus. Doctor Offenhauer is treasurer of the National Education Association. He was succeeded at Lima by J. MCLEAN REED, former superintendent at Fostoria, Ohio.

HANSON H. ANDERSON has been appointed principal of Arsenal Technical High School, Indianapolis. He has been a member of the faculty of that school since the institution was founded in 1912.

CLAUDE V. COURTER, former head of the Dayton school system, Dayton, Ohio, has been elected superintendent of schools at Cincinnati.

ALBERT S. TAYLOR, junior high school principal of the Bronx, N. Y., recently was elected assistant superintendent of schools.

ROBERT I. WHITE, principal of the Oglesby Elementary School, Chicago, has been promoted to the position of assistant superintendent in charge of evening schools of the Chicago school system. Four new district superintendents also were named by the board of education. JOHN A. BARTKY, principal of the Calumet High School, was named district superintendent in charge of elementary schools; OSCAR FOWLER, principal of Bowen High School, was elected high school district superintendent; DOUGLAS VAN BRAMER, principal of Waller High School, and HELEN S. MAIN, principal of Burley Elementary School, were elected elementary school district supervisors.

ROY E. SIMPSON, former superintendent of schools, Gilroy, Calif., has been appointed successor to C. RAY HOLBROOK as superintendent at Santa Cruz, Calif.

B. A. LEONARD, supervising principal of the Elmsford schools, Elmsford, N. Y., is the new superintendent of the Rye Neck schools at Mamaroneck, N. Y. He replaces DR. DONALD M. TOWER, who resigned to accept an appointment to the State Normal School at Oneonta, N. Y.

PAUL MUNRO, formerly superintendent of schools at Selma, Ala., is the new superintendent of schools at Columbus, Ga., succeeding DR. R. B. DANIEL, retired.

MAURICE J. THOMAS, deputy superintendent of schools, King County, Wash., has resigned to become superintendent of schools at Bothell, Wash.

H. RAYMOND DANFORTH, a member of the 1937 legislature of New Hampshire and chairman of the Industrial School Commission, has been elected superintendent of schools at Brookfield, N. H.

STANFORD HANNAH, principal at the Gridley Union High School, Gridley, Calif., for the last seven years, is now superintendent of the Taft Union High School and Junior College, Taft, Calif., succeeding FRANK A. BAUMAN.

KENNETH HARKNESS, former teacher in the high school at Mitchell, S. D., is new city superintendent of schools at Highmore, S. D., succeeding RALPH A. BORAH, resigned.

C. DAN PROCTOR is the new superintendent of the Ada city schools, Ada, Okla., succeeding B. R. STUBBS.

CARL LANCASTER, of the South Georgia College at Douglas, Ga., was recently elected superintendent of schools at Vidalia, Ga.

JOHN A. PENNINGTON, principal, has been elected superintendent of schools at Waynoka, Okla., succeeding L. E. WHEELER, who resigned to become associated with a publishing house.

J. H. FRAMER, superintendent of city schools at Miller, S. D., has taken a similar position at Spearfish, S. D.

CARLOS A. SCOTT, for six years principal of the Rose Hill Grade School, Kirkland, Wash., has been promoted to the superintendency of the Kirkland grade school district.

HENRY J. HAGEMAN, superintendent of schools at Clatonia, Neb., has resigned to accept the superintendency at Fairfield, Neb.

H. R. GOOLD, who has been superintendent of the city schools of Eugene, Ore., for the last nine years, has been made superintendent at Tacoma, Wash. DR. J. F. CRAMER, former superintendent of schools at The Dalles, Ore., is Mr. Goold's successor at Eugene. PAUL R. MCCULLOCH, principal of The Dalles Senior High School, has been promoted to the post of city superintendent.

HOWARD E. BOSLEY, former superintendent of schools at Mount Vernon, Ill., has joined the faculty of the Southern Illinois Normal State University at Carbondale.

BUELL E. CRUM, until recently high school principal at Winchester, Ind., is the new superintendent of schools at Griffith, Ind.

A. R. CLIFTON, superintendent of schools, Los Angeles County, California, has announced new county district superintendents for this school year. They are D. LLOYD NELSON, Temple school district; HAROLD O. WANT, Carmenita school district; MRS. HELEN D. HAYWARD, superintendent of the Culver City schools, succeeding BESSIE O. BROWN, new primary rural supervisor for Kern County; FOSTER A. BEGG, Manhattan Beach School; JAMES D. CATE, Ranchito school district, succeeding RAY REESE. and DR. CHARLES A. SMITH, Rosemead school district, succeeding A. ELWOOD ADAMS, now associated with the San Jose Teachers' College.

County Superintendents

H. W. BLACKENBURG has been appointed superintendent of schools for Stevens County, Washington, to fill the vacancy caused by the death of MRS. MARGARET CRAMER.

WILLIAM F. POOL, former superintendent of schools at Redmond, Wash., has been appointed assistant county superintendent of schools of King County, Washington.

CECIL GRAYSON has taken office as superintendent of schools, Lake County, Indiana, succeeding A. E. CONDON.

R. H. MCATEE has been named superintendent of the school system of Crook County, Washington, to succeed R. A. MCCULLY.

EUGENE O'BRYAN has retired as superintendent of Daviess County schools, Indiana, turning over his duties to D. H. CARTER.

Principals

DONALD L. SIMON, principal of Griffith High School, Griffith, Ind., has been appointed principal of the Bloomington High School, Bloomington, Ind., to succeed V. L. TATLOCK, who resigned.

ALTON E. RAMEY, principal of the Provincetown High School, Provincetown, Mass., has been elected superintendent of the school district comprising the towns of Provincetown. Truro and Wellfleet.

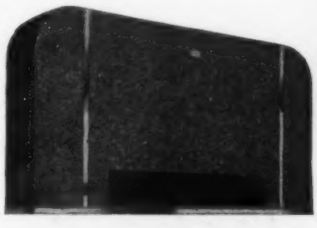
STANTON SINGLETON has been named principal of the University High School, Athens, Ga.

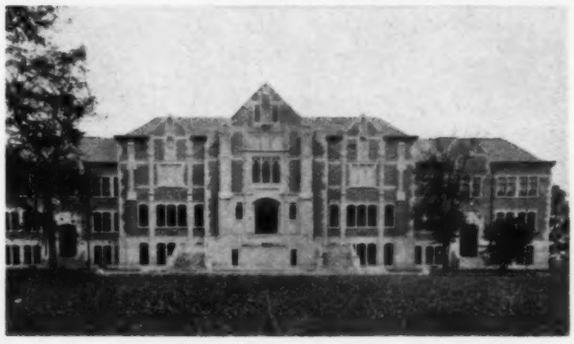
PAUL MARSHALL, for the past eight years principal of the Jarrett Junior

In teachers' college, too

Perpetual June in the classroom

THEY'RE doing big things at the Ball State Teachers College, Muncie, Ind. And they do it in a big way, as illustrated by this beautiful new Arts Building. Included in this fine structure are a number of Nesbitt Heating and Ventilating Units that keep class room air fresh—constantly replenished and spring-like in temperature. All drafts and over-heating are entirely eliminated by controlling the harmony of air stream and room temperature. A feature that you can have in your present school and that you'll demand in your new school. It's available without extra charge by the installation of Nesbitt Heating and Ventilating Units. Phone or write for complete data.





The new Arts Building of the Ball State Teachers College, Muncie, Indiana, is equipped with Nesbitt Heating and Ventilating Units. Architect, George F. Schreiber, Indianapolis; Heating Contractors, Freyn Brothers, Indianapolis.

AMERICAN BLOWER CORPORATION

Division of American Radiator and Standard Sanitary Corp.

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High School, Springfield, Mo., has resigned to accept the principalship of the Henry C. Kumpf School at Kansas City, Mo., succeeding JAMES C. BOND, who was appointed president of the Kansas City Teachers College.

DR. J. E. WINDROW, alumni secretary of George Peabody College for Teachers, Nashville, Tenn., has been appointed acting principal of the Peabody Demonstration School.

LEONARD E. LOOS, superintendent of public schools at Eureka, Ill., has been appointed principal of the Shore High School, Euclid, Ohio.

D. P. WHITLEY, principal of the high school at Cloverdale, N. C., has been elected principal of the senior high school at High Point, N. C., succeeding HENRY GRADY OWENS, who resigned to accept a professorship in education at Salem College, Winston-Salem, N. C.

E. S. HOWELL has been named principal of the new Central Senior High School at Bellingham, Wash., succeeding the late ERNEST F. WELLS.

J. SALZWEDEL, for the last four years principal of the high school at Osseo, Minn., has been named principal of the high school at Redwood Falls, Minn., to succeed C. N. MICKELSON.

R. V. BLOMFIELD has been named principal of Bliss Junior High School, St. Joseph, Mo.

T. BAYARD AYRES has been appointed principal of the Rock Hall High School at Rock Hall, Md.

A. C. SUNDE, junior high school principal at Litchfield, Minn., has resigned to accept an administrative position in the St. Paul, Minn., schools.

PROF. H. H. RYAN, principal of the University of Wisconsin High School, Madison, Wis., has resigned to become director of the department of education at the State Teachers College, Montclair, N. J. PROF. S. M. COREY, faculty member of the department of education of the University of Wisconsin, is the acting principal of the Wisconsin High School pending selection of a successor to Professor Ryan.

MARGARET C. MCMAHON, principal of the Vance School, New Britain, Conn., is retiring and is to be succeeded by MILDRED K. BARROWS.

ROLAND R. MORGAN has succeeded V. B. COOPER as principal of the Tri-High Schools of the Caroleen-Henrietta-Avondale system at Caroleen, N. C.

J. ALVIN TAYLOR, of the high school faculty, has been made junior high school principal at LaPorte, Ind., succeeding WENDELL R. GODWIN, who resigned to become principal of the high school at Peru, Ind.

S. P. VANDERSLICE has resigned his post as principal of the Washington-Lee High School, Clarendon, Va.

HAROLD LUNDGREN, former head of the grade school, Magnolia, Ill., has been promoted to the principalship of the Magnolia High School.

ROBERT C. KEENAN has been named principal of the Bowen High School, Chicago.

In the Colleges

DR. HARVEY H. DAVIS has been named chairman of the department of education at Ohio State University.

DR. HERBERT SORENSON, associate professor of education at the University of Minnesota, was named to succeed DR. EUGENE W. BOHANNON as president of the Duluth State Teachers College, Duluth, Minn. C. R. SATTGAST of Sioux Falls, S. D., has been named president of the Bemidji State Teachers College, Bemidji, Minn.

F. O. GILBERT, former superintendent of schools at Brooten, Minn., has been named by PRESIDENT GEORGE A. SELKE of the Minnesota Teachers College at St. Cloud to succeed F. M. SMUDDE, resigned state supervisor of rural education.

A QUIZ on AIR and LIGHT

Q. What window, developed recently, affords unusual fresh air ventilation for the schoolroom, with greater speed, ease and flexibility in opening and closing?

A. The Fenestra, "Dalmo-Fenmark" window.

Q. How is it designed?

A. It has several ventilators, one above another, all of which slide down from the top while projecting out at the bottom.

Q. How does it operate?

A. Ventilators are so connected that those above may be opened by opening the ventilator at the sill; or the sill vent may be closed, leaving upper vents open. By reopening the sill vent, all are automatically reconnected, and may be closed by shutting the sill vent.

Q. What about the light?

A. Constructed of steel sections, the Dalmo-Fenmark window admits the maximum amount of daylight for the size of the window selected — much more than ordinary bulky, double hung windows.

...The Dalmo-Fenmark window protects the interior against rain, even when open. Shaded ventilators act as awnings. Window may be screened. For complete information, write Detroit Steel Products Co., 2255 East Grand Boulevard, Detroit, Mich.

Note: Pictured above is a classroom in the Louis G. Maire School at Grosse Pointe, Mich., equipped with Dalmo-Fenmark windows. O'Dell and Rowland, Architects.

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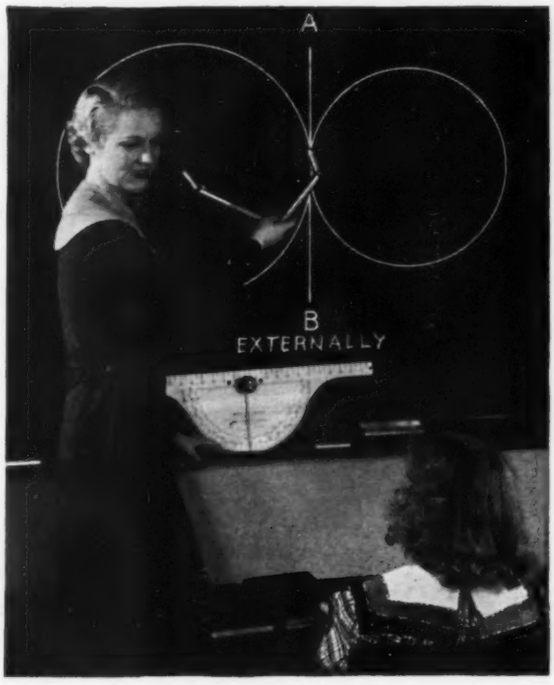

Regrinding or hobbling along with worn out blackboards is false economy. Replace with Sterling and forget your blackboard troubles. Sterling stays fresh and black.

You don't have to wait until every blackboard in your school needs replacement—replace your boards a room or two at a time. But by all means get your program under way.

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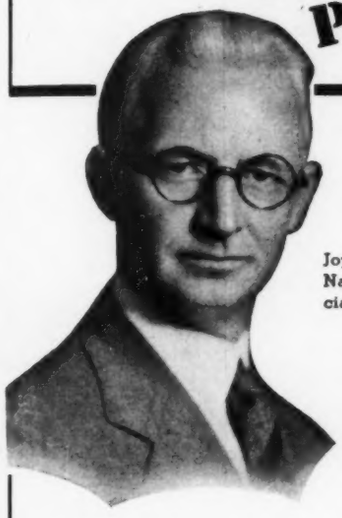

Joy Elmer Morgan, Editor, National Education Association of the United States

"IT MULTIPLIES THOUGHT... *adds to the working power of both Teachers and Students"*

THIS statement from so authoritative a source is but one more evidence of the ever-widening interest in the teaching of printing in schools. Were it only for the important weapon of intelligently directed publicity which a course in printing places at the command of school executives, a department of printing instruction would be abundantly justified. But this is just one of twelve cogent reasons. The others are briefly but clearly explained in the booklet, "Why Teach Printing?", a copy of which is awaiting your request. Why not write for it today?

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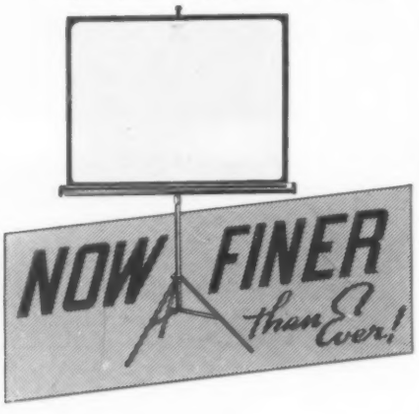

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On the Air During October

The following programs of particular interest to school people are arranged by the National Broadcasting Company and the Columbia Broadcasting System. The time is Eastern Daylight Saving Time.

Daily

National Farm and Home Hour[1]—1:30-2:30 p.m. (NBC Blue).

American School of the Air,[2] ninth season, will begin Monday, October 18, and run until May 6—2:30 to 3:00 p.m., (CBS). On Mondays "Exits and Entrances" will be heard; Tuesdays, literature and music; Wednesdays, geography; Thursdays, songs and folk tales, and Fridays, vocational guidance.

Monday

Explorers' Series, sponsored by the American Museum of Natural History — 6:15-6:30 p.m. (CBS).

All America, dramatizations of American history, U. S. Office of Education—10:30-11:00 p.m. (CBS).

President Roosevelt will utilize a 250-station joint CBS-NBS hookup to address the nation on behalf of the country's private, civic, health and welfare agencies on October 18. Time to be announced later.

Tuesday

Fun in Music, band lessons under direction of Dr. Joseph Maddy—2:00-2:30 p.m. (NBC Red).

NBC Music Guild, unusual compositions of great composers; guest artists—2:30-3:00 p.m. (Blue).

Stories of Industry, sponsored by the U. S. Department of Commerce—4:30-5:00 p.m. (CBS).

Science Service Series, dramatizing and explaining latest scientific developments—5:15-5:30 p.m. (CBS).

Wednesday

Current Questions Before the House, each week a different member of the House of Representatives discusses a current problem—3:30-3:45 p.m. (CBS).

U. S. Cabinet Series, presenting a different member of the President's cabinet each week—10:30-11:00 p.m. (CBS).

Your Health, supplementary material for health teaching in junior and senior high schools, sponsored by the American Medical Association—2:00-2:30 p.m. (NBC).

October 13—Learning About Health.
October 20—Growing for Strength and Beauty.
October 27—Seeing and Hearing Well.

Thursday

Current Questions Before the Senate, a member of the Senate is heard each week discussing a current problem—5:00-5:15 p.m. (CBS).

Friday

Mozart Festival, marking 150th anniversary of first presentation of Mozart's opera, "Don Juan," October 29—1:30-2:00 p.m. (NBC Blue).

Music Appreciation Hour under Dr. Walter Damrosch, October 15—2:00-3:00 p.m. (NBC Red and Blue).

NBC Radio Guild, revivals of plays, new and old, that have had general acceptance—3:00-4:00 p.m. (Blue).

Education in the News, dramatization of news items in education by the U. S. Office of Education—6:00-6:15 p.m. (NBC Red).

Saturday

Inauguration of Dr. Levering Tyson as president of Muhlenberg College, Allentown, Pa., October 2—11:00 a.m.-12:00 noon. (NBC Blue).

NBC Concert Hour—8:45-9:30 p.m. (Red).

English broadcast, "The March of the Forty-Five," the story of the attempt of Bonnie Prince Charles to regain the throne, October 2—8:00-9:00 p.m. (NBC Blue).

Sunday

University of Chicago Round Table Discussions—12:30-1:00 p.m. (NBC Red).

The World Is Yours, thrilling adventures in the world of science by the Smithsonian Institution—4:30-5:00 p.m. (NBC Red).

Third Intercontinental Concert, October 24—11:00-11:30 a.m. (NBC Blue).

[1]Except Sunday.
[2]Monday through Friday.

RICHARD C. JONES, who was appointed principal of the State Teachers College training school, Memphis, Tenn., last June, did not serve a day in that office. A second promotion made him dean at the college, succeeding DEAN J. M. SMITH, who was appointed assistant state commissioner of education.

ARTHUR U. EDWARDS, assistant professor of education at South Dakota State College, has been appointed principal of the elementary campus school at Eastern Illinois Teachers College, Charleston.

E. L. SMITH, a member of the Oklahoma department of education, has been named president of Northeastern Oklahoma Junior College at Miami to succeed EARL E. EMERSON, who resigned.

DR. HENRY HARAP, of Western Reserve University, has been appointed professor of education at George Peabody College for Teachers, Nashville, Tenn.

DR. RUSSELL M. STORY has been appointed president of Pomona College and Scripps College, both in Claremont, Calif., succeeding DR. JAMES A. BLAISDELL, who retired a year ago.

JOHN BAUMGARTNER, superintendent of schools at Brinkley, Ark., for twenty-three years, has been named to succeed J. S. WILLIAMS as president of the Beebe Junior Agricultural College, Beebe, Ark.

A. G. CONFREY, dean of the junior college, Springfield, Ill., has resigned to become a member of the faculty of DePaul University, Chicago.

DR. WILLIAM HEARD KILPATRICK, retired professor of the philosophy of education at Teachers College, Columbia University, will deliver the V. EVERIT MACY lectures at the college during 1938-1939.

DR. JOHN EDWIN POMFRET, New York City, is the new dean of the graduate school and senior college of Vanderbilt University.

DR. T. ERNEST NEWLAND of Bucknell University has succeeded DR. ROBERT G. BERNREUTER as chief of the division of special education in the Pennsylvania department of public instruction.

DR. T. W. SIMMONS, dean at the Tracy Junior College, has been appointed to a similar position in the Crosby-Ironton Junior College, Duluth, Minn.

DR. SHERWOOD GATES is the new dean

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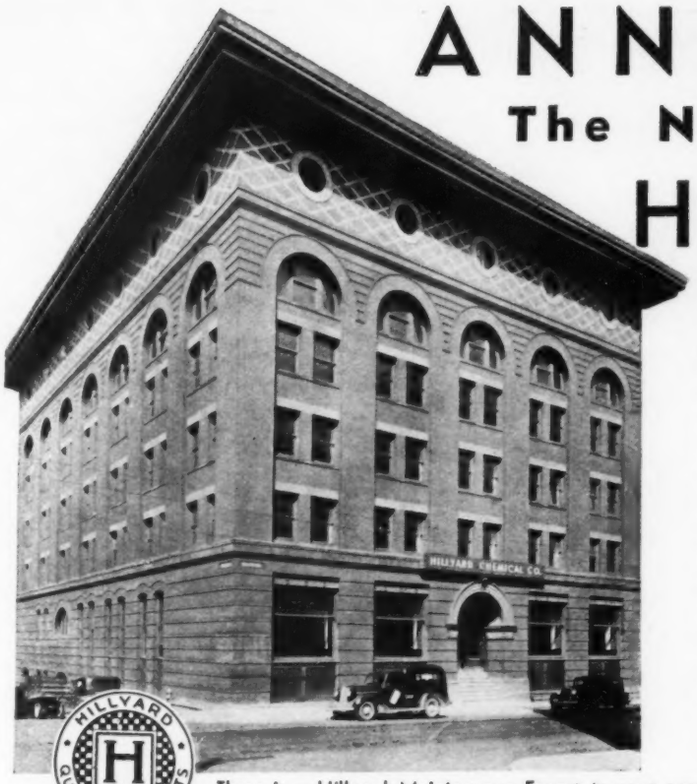

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PROMPT care is important in preventing infected wounds. Even minor wounds may become infected when antiseptic treatment is delayed. Children and adults report injuries promptly when Mercurochrome is used, because treatment is not painful.

Mercurochrome, H.W.&D.
(Dibrom-oxymercuri-fluorescein-sodium)

is non-irritating and exerts bactericidal and bacteriostatic action in wounds. Be prepared with Mercurochrome for the first aid care of all minor wounds and abrasions. In more serious cases, consult a physician.

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Baltimore, Maryland

After a thorough investigation of the evidence for and against at the close of the last period of acceptance, the Council on Pharmacy and Chemistry of the American Medical Association again reaccepted (1935)

MERCUROCHROME, H. W. & D.
(*Dibrom-ozymercuri-fluorescein-sodium*)

SEES ALL—PLAYS ALL
UNIVERSAL
16MM SOUND PROJECTOR

The advanced Universal has won the approval of users in every field. This ruggedly constructed projector embodies all latest features. Throws brilliant image to desired screen size. True tone quality. Amplification for large or small audiences. Compactly portable in carrying case. *Universal is low in first cost.* Economical upkeep.

OUTSTANDING FEATURES

SOUND PROJECTOR

750-Watt projector lamp. Brilliant pictures. For all size reels. Heavy duty construction. Easy, simple operation. Trained operator not necessary. Adjustments quickly accessible. For sound or silent films. Full draft ventilation. Central oiling. Bausch & Lomb sound optical unit. Underwriter approved. Easy on film.

AMPLIFIER

Power for large or small groups. Phono or Microphone outlet. Tone-control. Volume control. Connection arranged so that error in operation is impossible.

SPEAKER

Dynamic Type. 12-inch cone. Special voice balance. 50 ft. voice line. Speaker in amplifier case for carrying.

MAY BE PURCHASED ON THE UNIVERSAL BUDGET PLAN

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Division of
SENTRY SAFETY CONTROL CORP.
1919 Oxford St., Philadelphia, Pa.
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of Kalamazoo College, Kalamazoo, Mich., succeeding DR. H. H. SEVERN, who retired last June.

DEAN WINIFRED J. ROBINSON of the Women's College, University of Delaware, will retire next June after twenty-three years as a member of the faculty.

DR. R. B. VON KLEINSMID, president of the University of Southern California, recently visited Sydney, Australia, where he made arrangements for the regular exchange of professors and students between the Universities of Sydney and Melbourne and the University of Southern California.

F. M. COOK, former principal of the high school at Fairfield, Ala., resigned to accept a position at the Alabama Teachers College at Florence. He was succeeded at Fairfield by W. H. MCMURRY.

DR. JAMES WASHINGTON BELL, professor of money and banking at Northwestern University, has been appointed acting dean of the university's graduate school.

Deaths

DR. CHARLES FRANKLIN THWING, president emeritus of Western Reserve University, died recently at his home in Cleveland. Doctor Thwing occupied the president's chair at Reserve for thirty-one years until his retirement in 1921.

DR. JACOB G. COLLICOTT, superintendent of the schools at Columbus, Ohio, for seventeen years, died suddenly of heart attack at Indian Neck, Conn.

HERBERT O. CLOUGH, for the last nineteen years superintendent of schools at Vernon, Conn., died at his summer home at Kennebunkport, Me., of heart attack.

DR. FRANCIS W. SHEPARDSON, recognized as America's greatest college fraternity leader, having been national president both of Beta Theta Pi and of Phi Beta Kappa, died of heart disease while en route from his home at Granville, Ohio, to Columbus.

DR. MARK E. PENNEY, for four years director of vocational rehabilitation for the state of Illinois, died recently at Jacksonville, Ill. Doctor Penney was president of James Millikin University, Decatur, Ill., from 1924 until 1930, and was a former professor of education at Ohio State University and at Cornell University.

MIRA H. HALL, founder and principal for thirty-seven years of Miss Hall's School for Girls at Pittsfield, Mass., died recently of a heart malady at York Beach, Me. MARGARET H. HALL, niece of the late founder, has been appointed acting headmistress.

DR. EUGENE FAIR, president of Northeast Missouri State Teachers' College at Kirksville, died of a cerebral hemorrhage in St. Louis, where he had gone to address a fraternity meeting.

WILLIAM A. WALLS, superintendent of schools at Kent, Ohio, for more than twenty years, died from injuries received in an automobile accident. JOHN W. SPANGLER, former principal of Roosevelt High School, Kent, is his successor.

RUTH E. GUERNSEY, headmistress of the Oxford School, West Hartford, Conn., died recently after an illness.

JOHN M. BURNETT, associate superintendent of the city schools of Tuscaloosa, Ala., died recently after a long illness. He was a former president of the Alabama Education Association.

FRED W. HILTON, principal of the Weymouth High School, Weymouth, Mass., for the last 27 years, died at his home at Weymouth Heights.

MRS. SOPHIE WILHELMINE RAHE, former superintendent of schools in Baltimore, died recently at her home in the Bronx, New York City.

Miscellaneous

DR. JAMES ROWLAND ANGELL, recently entering upon his duties as educational counselor to the National Broadcasting Company, told press representatives that after a month of "apprenticeship" in radio work in New York City, he would sail for Europe to continue his study of radio education.

DR. FRANK P. GRAVES, president of the University of the State of New York, and state commissioner of education, was elected national president of Phi Beta Kappa at the triennial council session last month in Atlanta, Ga.

DR. HERBERT SHUEY, formerly connected with the Kansas Industrial School for Boys, has been employed by the Topeka school system as a full-time psychologist and sociologist.

D. C. ALLEN, rural education supervisor for the Connecticut Board of Education, has retired, after having been in the employ of the state for thirty-four years.

EUGENE B. ELLIOTT, Michigan state superintendent of public instruction, has announced the appointment of G. ROBERT KOOPMAN as coordinating director of curriculum, and of JOHN C. PARKER as director of the Michigan study of the secondary school curriculum.

VISUAL EDUCATION

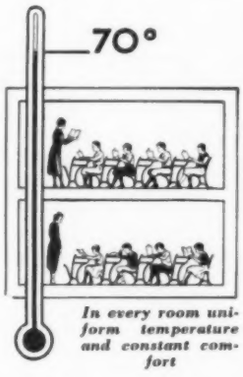
New Productions

Nineteen new educational sound films recently have been completed by Erpi Picture Consultants, rounding out a broad program of production covering a period of many months.

Two new series have been inaugurated for use in elementary schools. One deals with human geography and includes seven films; the other series, of which three films have been completed, is intended for lower primary grade levels.

ALERT MINDS AND HEALTHY PROGRESS . . . DEPEND ON UNIFORM HEATING

In schools everywhere, you'll find Hoffman Controlled Heat contributing that great essential—uniform temperature. Especially among young children, uneven heating is a standing invitation to colds. And too much or too little heat is surely a drag on mental activity.

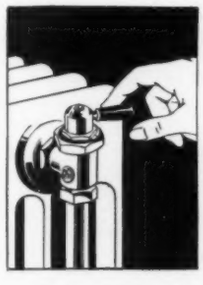


In every room uniform temperature and constant comfort

Why Hoffman Controlled Heat is so desirable for school heating is explained by its basic operating features. Every radiator is equipped with a No. 7 Hoffman Modulating Valve, which serves a double purpose. This valve permits easy "balancing" so that each radiator heats equally. It can also be manually adjusted to raise or lower the temperature in any room.

Hoffman Controlled Heat has another feature which recommends it strongly to careful managers—it is decidedly easy on fuel. Because it is a vapor-vacuum system it operates on extremely low steam pressures or under vacuum. Over-heating and fuel waste are thus avoided. The necessary equipment is adaptable to any type of steam boiler, whether oil, gas or coal-fired.

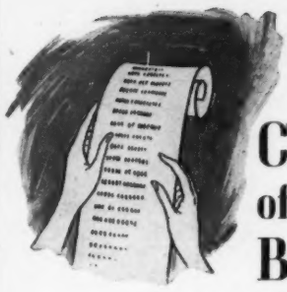
For complete information write to the Hoffman Specialty Co. Inc., Dept. NS-10, Waterbury, Conn.



A finger's touch raises or lowers room temperature

HOFFMAN CONTROLLED HEAT

Made by the makers of Hoffman Venting Valves, Supply Valves, Traps and Hoffman-Economy Pumps — sold everywhere by leading wholesalers of Heating and Plumbing equipment.



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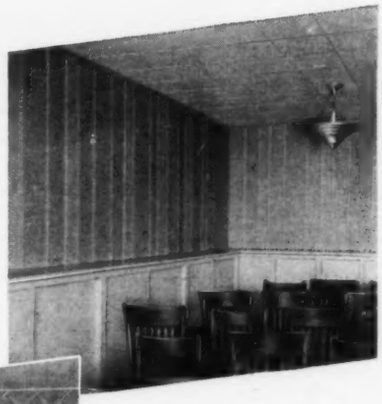
Classroom walls and ceilings should be beautiful, but not obtrusive—excellent in design and dignified. They should promote *quiet* to aid concentration and prevent nerve strain. Nu-Wood, the modern interior finish material, is beautiful—softly, harmoniously colored, with a variety of shades to choose from. Nu-Wood patterns are dignified and interesting. Nu-Wood QUIETS NOISE, because of its inherent sound-absorbing structure. It also *insulates.*



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Nu-Wood is unsurpassed for finishing auditoriums or gymnasium walls and ceilings. Not only does it create the right decorative effect, but it also corrects faulty acoustics. With Nu-Wood, you can quickly modernize your existing auditorium or gymnasium—or finish a new one.

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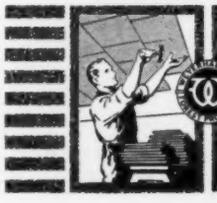
In the school cafeteria—as well as in school corridors and offices—Nu-Wood is the ideal finish. Low in cost, quickly and easily applied, it fits into the school budget. Then, too, Nu-Wood reduces redecorating costs to the very minimum. Write us for complete information about Nu-Wood, and about its successful application in schools.

Mail the coupon for information and illustrations showing NU-WOOD school interiors.

NU-WOOD *the insulating interior finish*



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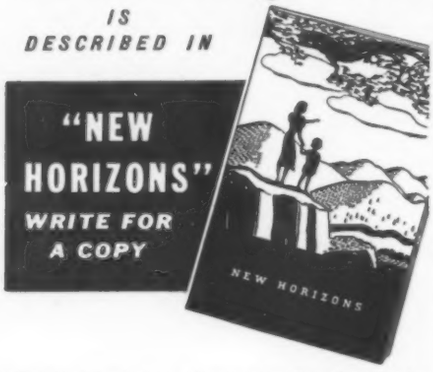


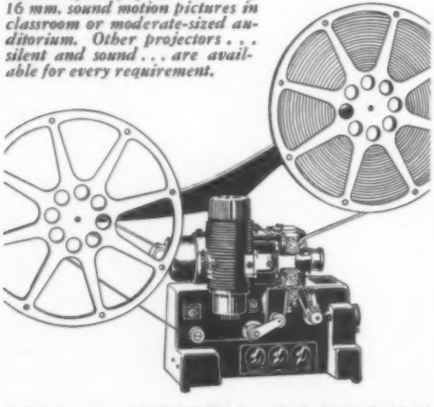
THAT motion pictures make the teaching of many subjects speedier and easier is agreed by prominent educators. The reasons why they recommend this modern educational tool are fully discussed in *New Horizons,* recently published.

Why pupils learn from 20% to 90% more in shorter time, and forget less, is explained. The diversity of subjects on which motion pictures are invaluable is discussed. The results secured by leading educators are described and their comments quoted. Ways by which schools make the equipment pay for itself are given, together with pointers on how to select equipment that will satisfy.

Those who have already seen *New Horizons* praise it as one of the most helpful and complete treatments of school motion pictures ever published.

It is free without obligation to everyone interested in better schools. Mail the coupon now.

Filmosound 138, a single-case, easily portable outfit assuring theater-quality presentation of 16 mm. sound motion pictures in classroom or moderate-sized auditorium. Other projectors . . . silent and sound . . . are available for every requirement.



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BELL & HOWELL

Of the remaining nine new pictures three complete the series in physical science; one adds to the series on human biology; another deals with light, and four music films replace those previously issued.

Books on Motion Pictures

Two new booklets on motion pictures in education have been released in the American Council on Education Series, "The Motion Picture in Education: Its Status and Its Needs," and "Teaching With Motion Pictures: A Handbook of Administrative Practice." The authors are Edgar Dale and Lloyd Ramseyer of Ohio State University. The first book is a review of five major elements in the development of visual instruction, and the other deals specifically with classroom problems in the use of motion pictures.

Running Time

To compute the length of a motion picture program, the Ideal Pictures Corporation in its 1937-38 catalogue of listings just released, tells us to multiply the number of reels by eleven. A reel is approximately 400 feet in length and requires approximately eleven minutes to project. A complete program consists of nine reels mounted on two 1,600-foot reels and it requires approximately 1½ hours to project. The new catalogue contains listings for 16 mm. sound, 16, 35 and 8 mm. silent films.

Rental Library

A number of schools are taking advantage of a two-year membership in the International Library of Visual Aids, New York City. This is a new service sold to schools on a library membership basis, which consists of one projector and eighteen forty-minute sound units to be supplied at the rate of one unit a month for the two years. The pictures are for auditorium use and are a combination of entertainment and education. Of the fourteen units now completed, four units, or sixteen reels, are titled "The March of Civilization," being the story of the successful waves of migration of the Indo-European races across Asia, Europe and America to the Orient; three units, or twelve reels, on "Evolution of Economic Life"; and six units, or twenty-four reels, on "Man Against Nature." Manuals are included. A narrative accompanies each picture.

Films for the School Screen

Biology IV—Birds

Baby Songbirds at Mealtime—Delightful nature study dealing almost entirely with little songbirds and their eating habits; shows many fascinating pictures of parent birds feeding their nestlings. 1 reel. 16 or 35 mm., silent. For rent or for purchase. Films of Commerce Company, Inc., 35 West Forty-Fifth Street, New York City.

Birds of the Seacoast—Illustrates how water birds are equipped with long wings, webbed feet, food pouches and bills for procuring food. 1 reel. 16 mm., silent. For purchase. Eastman Kodak Company, Teaching Films Division, Rochester, N. Y.

The Nightingale—The family life of nightingales from the time the eggs are hatched until young birds are able to look after themselves. The song of the nightingale is successfully recorded on the film. 1 reel. 16 mm., sound. For rent. Ideal Pictures Corporation, 28 East Eighth Street, Chicago.

Cuckoo's Secret—Edgar Chance, English naturalist, spent two summers under an artificial haycock to obtain these pictures of the cuckoo. 1 reel. 16 and 35 mm., silent. For rent. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

In Bird Land—Life of smaller birds: finches, English sparrow, chickadees, hedge sparrow, linnet, marsh wren, kingfisher, Western humming bird and flickers. Edited by G. Clyde Fisher of the American Museum of Natural History. 1 reel. 16 and 35 mm., silent. For rent. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

Bird Neighbors in Winter—A film on bird protection, showing the chickadee, downy woodpecker, white-breasted nuthatch and other common winter birds, and how the bird lover may protect and make friends with them. 5 minutes. 16 and 35 mm., silent. For rent. Canadian Government Motion Picture Bureau, Ottawa, Ont.

Birds of Bonaventure—The bird sanctuary in the Gulf of St. Lawrence. 1 reel. 35 mm., silent. For rent or for purchase. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

The Short-Eared Owl—The lonely fens of Norfolk are the home of the short-eared owl, a handsome creature with two little tufts of feathers over her ears. 1 reel. 16 mm., sound. For rent. Ideal Pictures Corporation, 28 East Eighth Street, Chicago.

Birds of Passage—Migration of European birds up the Nile valley. 3 reels. 35 mm., silent and sound. For rent or for purchase. F. C. Pictures Corporation, 505 Pearl Street, Buffalo, N. Y.

Special Messengers—Carrier and racing pigeons studied in normal and slow motion pictures. 1 reel. 16 mm., sound. For rent or for purchase. Walter O. Gutlohn, Inc., 35 West Forty-Fifth Street, New York City.

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THE exceptionally wide range of adjustments on this HEYWOOD-WAKEFIELD ECLIPSE ADJUSTABLE DESK assures correct and comfortable seating for all ages and grades . . . from kindergarten through college. It is a long wearing, rigid unit, with broad bearing surfaces in its construction. The chair shown is of the swivel type which permits pupils to face side blackboards and which assures easy ingress and egress. Many other practical school desks and chairs are available in the Heywood-Wakefield School Furniture Line, any of which we shall be pleased to demonstrate to you in detail.

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School executives and their architects are invited to make full use of our engineering and consultation staff—whether the problem is one of modernizing present food service facilities, planning a new installation or buying single pieces of cafeteria and kitchen equipment.

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• *Illustrated is a view of the Pix equipped cafeteria of Lindbloom High School, Chicago.*

WINSTON FLASHES

ALTHOUGH an herb eater, the elephant is the largest and strongest of living land animals and often attains a weight of 8,000 pounds."—From *Larger Wild Animals*, interesting description accompanying one of the 10 full-page color plates in THE WINSTON SIMPLIFIED DICTIONARY FOR SCHOOLS.

FOOTBALL season again! Annual gate receipts of this most profitable of American sports are conservatively estimated at forty million dollars.

IF you are an average human being, you eat about a ton of food a year.

EASIEST foreign language for Americans to learn is French. UN PEU DE TOUT, new second-year French reader by de Sauzé and Dureau, makes learning easy, pleasant, even exciting. Write for full information.

NEW YORK CITY housewives frequently time the breakfast eggs by changes of the red and green traffic lights.

PLAN now to celebrate Children's Book Week (November 14–20) by adding to your school library several of the new Winston Special Library Offers—eight separate combinations of new, wanted library books. Each combination, including from nine to thirty-one titles, sent *postpaid* for just $10. Write today for illustrated circular.

LATEST census report shows nearly 4,000 centenarians in the United States.

NEW Geography Workbooks for grades 4–8, for use with the J. Russell Smith geographies (WORLD FOLKS, AMERICAN LANDS AND PEOPLES, FOREIGN LANDS AND PEOPLES, OUR INDUSTRIAL WORLD, HUMAN USE GEOGRAPHY) or with *any* single-cycle series, are now ready.

CAUTION for your pupils: DON'T break milk bottles on Mischief Night (eve of Hallowe'en). A milk bottle averages only twenty trips before it is broken—and the breakage adds $12,000,000 to America's annual milk bill.

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THE BOOKSHELF • • • •

1001 WAYS TO USE CONCRETE. *Edited by Harold O. Hayes. Chicago: Popular Mechanics Press,* 1937. *Pp.* 238. $5.

Very worthy of a place in the general shop's library; invaluable to those who turn in this direction for a hobby.

THE SIXTEENTH CENTURY. *By Sir Charles Oman. New York: E. P. Dutton and Company, Inc.,* 1937. *Pp.* vii + 247. $3.

A history of a glorious century, so written that it lives again vividly for those who have the will to read.

WEALTH, CHILDREN AND EDUCATION. *By John K. Norton and Margaret Alltucker Norton. The Strayer-Engelhardt School Administration Series. New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* xviii + 100. $2.

Bringing up to date of earlier researches by the authors in the field of national aid to public education.

THE CURRICULUM AND CULTURAL CHANGE. *By Pickens E. Harris. New York: D. Appleton-Century Company, Inc.,* 1937. *Pp.* xx + 502. $2.75.

Recommended for reading to teachers, principals and superintendents.

SOCIAL CHARACTERISTICS OF CITIES. *A Basis for New Interpretation of the Rôle of the City in American Life. By William F. Ogburn. Chicago: The International City Managers' Association,* 1937. *Pp.* v + 70. $1. *(Paper Cover).*

A sociologist makes certain deductions concerning the city in its different phases.

RECENT TRENDS IN RURAL PLANNING. *By William E. Cole and Hugh Price Crowe. New York: Prentice-Hall, Inc.,* 1937. *Pp.* xv + 579. $3.50.

Good summary account of some recent developments in an attempt to create better rural conditions through intelligent organization and use of resources and services.

THE EDUCATION OF HYMAN KAPLAN. *By Leonard Q. Ross. New York: Harcourt Brace and Company,* 1937. *Pp.* 176. $2.

Mr. Hyman Kaplan at last has been placed between jacket covers. Student at the American Night Preparatory School for Adults, Mr. Kaplan is already something of a classroom legend. His bursts of inspiration, his enthusiasm for learning and his exploits into the American idiom transcend all previous classroom heroes. Excellent for reading aloud at schoolmasters' clubs and at home.

AN INTRODUCTION TO PUBLIC-SCHOOL RELATIONS. *By Ward G. Reeder. New York: The Macmillan Company,* 1937. *Pp.* xii + 260. $2.25.

Oriented by a sound philosophy concerning truthfulness, this elementary text in institutional interpretation proceeds to theme development through emphasis on direct publicity.

Just Off the Press

SAFETY THROUGH THE YEAR. *An Activity — Text — Workbook for Upper Grades. By Florence Nelson, Olis G. Jamison and Raymond E. Sparks. New York: McGraw-Hill Book Company, Inc.,* 1937. *Pp.* 128. $0.48 *(Paper Cover).*

READ AND COMPREHEND. *By Pearle E. Knight and Arthur E. Traxler. Boston: Little, Brown and Company,* 1937. *Pp.* ix + 233. $0.96 *(Paper Cover);* $1.28 *(Cloth Bound).*

THE MOTION PICTURE IN EDUCATION. *Its Status and Its Needs. A Report of the Development of the Educational Motion Picture Project by the Committee on Motion Pictures in Education. American Council on Education Studies, Series II: Motion Pictures in Education, Vol. I, Number 1. Washington, D. C.: The American Council on Education, April,* 1937. *Pp.* viii + 24. *(Paper Cover).*

TEACHING WITH MOTION PICTURES. *A Handbook of Administrative Practice. By Edgar Dale and Lloyd L. Ramseyer. American Council on Education Studies, Series II: Motion Pictures in Education, Vol. I, Number 2. Washington, D. C.: The American Council on Education, April,* 1937. *Pp.* viii + 59. *(Paper Cover).*

TELLING SCHOOL CHILDREN ABOUT SOCIAL WORK. *A Bulletin Based on the Problems, Opportunities, and Practices of Community Chests and of Councils of Social Agencies in Their Contact With Pupils. New York: Community Chests and Councils, Inc.,* 1937. *Pp.* 23. *Mimeographed.* $0.50 *(Paper Cover).*

THE PUPIL'S GUIDE *to the Individualized Aspects of Study of the Materials in Kelty's* THE GROWTH OF THE AMERICAN PEOPLE AND NATION. *Boston: Ginn and Company,* 1937. *Pp.* 105. $0.28 *(Paper Cover).*

THE PUPIL'S GUIDE *to the Individualized Aspects of Study of the Materials in Kelty's* THE BEGINNING OF THE AMERICAN PEOPLE AND NATION. *Boston: Ginn and Company,* 1937. *Pp.* 95. $0.28 *(Paper Cover).*

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Better Results at Lower Cost

Although a floor machine costs more than a mop, that fact does not make its use more costly. On the contrary, you'll find the cost of cleaning and polishing floors with a Finnell actually less than mopping, considering the degree of cleanliness, sanitation and beauty you get. Speed is one reason. Power is another. Uniformity another. Hundreds of schools are among enthusiastic users of Finnell Machines.

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The Finnell System includes everything you need to maintain floors,—a complete line of floor machines, fillers for every type of floor, sealers, waxes, cleansers, soap. Also a *free floor service*, rendered by experts, that tells you what to do, what to use and how to use it.

Full information on request. No charge or obligation for consultation. Address Finnell System, Inc., 210 East Street, Elkhart, Indiana.

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NOTES FOR BUYERS • • •

Future Inventors

Concoctions and weird devices that make a piker of Buck Rogers come from our school laboratory. Although none is adaptable to the needs of a changing world, our real objection is the way they cause laboratory sinks to crack and peel after a particularly industrious session. So we adopted a myopic viewpoint until Karcite put things into proper focus by coming out with a new molded laboratory sink.

Karcite is the dish for principals who have a mind to crack down on their lab classes and for others who are about to crack up because of mounting laboratory repair bills. A lot of chemical formulas and water will go down the drain before any cracking, peeling or chipping will be discovered. In fact the maker of these sinks, Kewaunee Manufacturing Company, Adrian, Mich., claims for them high resistance to thermal shock, an item that will surprise laboratory pranksters as much as it did us.

Dust Bowl

Sakes alive, child, that ain't no dust storm. That's Elmo, the janitor. What's that? Sure he's got legs and arms, same as you and me. He looks mad? Well, mebbe from there things looks a lot different to him.

If your janitor is kicking up a dust, why not take him out of the dust bowl? It is just possible that he may not be able to see the floor for the dust. For schoolrooms rapidly acquiring the appearance of the Great American Desert, we recommend the Spencer Method.

In another school the other day we watched a janitor make the rounds with his Spencer portable vacuum cleaner. Only some fast footwork and our comparative youth enabled us to keep within hailing distance of this chap as he sped over acres of floors, leaving them clean and dustless.

If dust isn't your present problem (and we'll bet it is), engrave the name Spencer in your mind for the future. The Spencer Turbine Company is domiciled in Hartford, Conn.

Strip-Tease

That pine and oak paneling, once glossy and dazzling, is shedding its finish, its polish and varnish—is peeling and cracking—and beauty is lacking, in the new schoolhouse on the hill.

To alleviate this dismal prospect comes the American Floor Surfacing Machine Co., Toledo, Ohio, whose business is to ferret out items that have the schoolhouse custodians backed against the wall.

For walls that have fallen prey to the strip-tease craze, we can recommend treatment with the Model C American Spinner, a little brother to that machine that put that mirror-like gloss on your floors. This nifty machine is compact, yet it retains all the features of the larger, professional models. For work on paneling the machine may be equipped (at a small extra cost) with a lower set of handles, so that perfect balance is maintained in perpendicular position.

In case the strip-tease has not spread to your school, we still think that the custodian can find a lot of surfaces to keep shiny with the American Spinner.

• *And No Dust*

Cleaning with a Spencer Central Vacuum System never stirs up dust. All litter, dirt and dust, and even the air in the room is pulled down the vacuum system into a dirt receptacle in the basement.

Dust rather than dirt, is the chief enemy of furniture, books, rugs, walls and decorations. And it is dust, repeatedly circulated by traffic in the rooms, that saturates the very air the students and instructors breathe.

So most architects insist on a Spencer System when the school is built, and the older schools are now rapidly installing Spencer Portable Cleaners in sizes from 1/3 Horsepower up.

Don't experiment with dust. Eliminate it with the powerful vacuum of a Spencer System. With its fast working vacuum tools, one man can clean wood, cement, composition or carpeted floors, as well as the furniture, ceilings and walls.

Ask for a Demonstration In Your School

CENTRAL AND PORTABLE VACUUM CLEANING SYSTEMS

SPENCER HARTFORD

THE SPENCER TURBINE COMPANY HARTFORD CONNECTICUT

S-94-E

Prediction

We are not precisely psychic, but we can name the school that will be the winner in the state music contest next spring. We base our prediction upon a visit to music classes in this school.

No ordinary classes were these. Not a monotone in the group, no flatting of high notes and utter precision in time and in tone control. Puzzled, we hunted up the school administrator. His experience is one that can be duplicated in your school. When he first installed an RCA console cabinet loud-speaker, he told us, less than half of the children could distinguish sour notes in music. Now, because this loud-speaker has exceptional tonal quality and high fidelity, music appreciation is greatly improved. RCA Manufacturing Company, Camden, N. J., welcomes inquiries.

For Amateurs

Latest contribution towards making things move along smoothly for the novice comes from Vallen, Inc., Akron, Ohio, which has perfected a roll picture screen control that may be stopped or started with a twist of the wrist. This, we think, will help to get that evening lecture or movie off to a good start.

If the trouble in your school has been to find room for both the audience and the screen, Vallen is prepared to do something for you. If practical facts about its automatic control are what you want, the device is operated electrically, control is fully automatic and the timing unit is an integral part of the gear reduction unit. Once the timing cams are installed, says Vallen, there is no danger of slippage.

Locker Crisis

There's a crisis in the locker room and the entire football squad is under suspicion. Coach Tomally is wearing a hang-dog expression in anticipation of a painful interview with each of the boys. And all because Jim's wallet disappeared from his coat in the locker room during practice.

While thoughts of the impending embarrassment run through Coach Tomally's mind, he makes a mental note to remind the superintendent about getting those steel group lockers. He groans as he wonders how he can maintain team spirit with such goings-on. With those lockers, he muses, each of the boys will have a safe place for valuables. He must remind the superintendent, too, that group lockers take little floor space, yet provide hangers for outer clothing.

Determination in his eye, Coach Tomally sets out for the office of the superintendent. Memo: All Steel Equip Company, Aurora, Ill., makes the lockers.

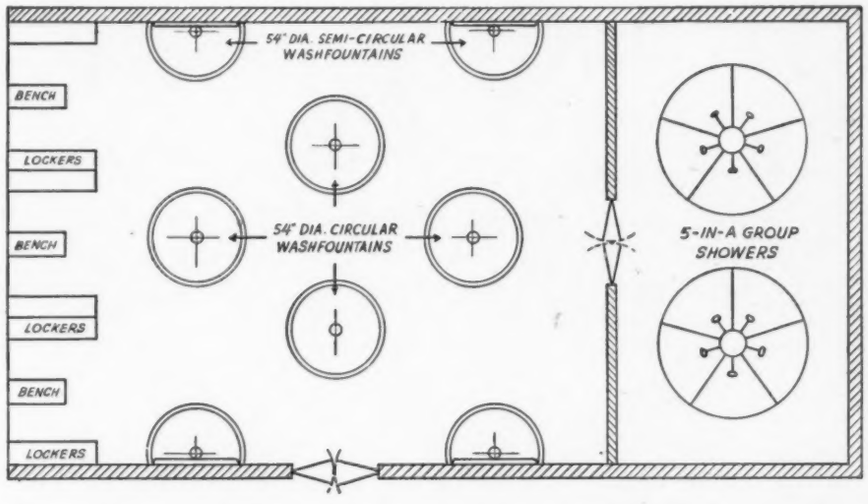
Sweet and Hot

There's sweet music in the domestic science department. Echoes carry to the superintendent's office and he immediately tunes in. Chorus is by the pupils, with the home economics teacher carrying the solo part.

Cause of all this harmonizing is the department's new automatic washing machine, which looks like a radio, but broadcasts music far sweeter to the ears of the teaching staff.

"Get hot!" croons the home economics teacher, as she twists a dial. Immediately the machine swings into its dance, soaking the clothes, washing them, rinsing them with uncanny skill and finally whirling them until they are nearly dry. Through the round glass door, shaped like a porthole, pupils catch glimpses of the clothes as they dance through their routine. The machine even scours itself clean (we wish we had that device for our bathtub).

You can ask Bendix Appliances, Inc., Detroit, about it. We suggest that, unless schoolmen are prepared to buy one just like it for their wives, no mention be made at home of this automatic washer.



Suggestion for Your Washroom

Only *20 x 35 FEET* of space is required to accommodate 64 students washing at one time at the Bradley Washfountains. And the two Bradley Group Showers accommodate 10 at one time.

Floor space is only one important saving with Bradleys. 64 students would require 128 faucets for washing at bowls instead of only 8 sprayheads with Bradley Washfountains. Five persons can bathe at one time in each Bradley Shower. Maintenance cost is radically reduced. Water bills and water heating costs are cut. And in addition, Bradley washroom equipment is the most sanitary type made.

Get the complete story of Bradley savings by writing for new catalog No. 435. BRADLEY WASHFOUNTAIN CO., 2207 W. Michigan St., Milwaukee, Wis.

BRADLEY
WASHFOUNTAINS and SHOWERS

AND

headed for outstanding popularity

This new "Colonial" design chair is a worthy addition to a very comprehensive line of auditorium seating and is bound to capture the interest of discriminating buyers throughout the country. It combines in an unusual degree pleasing appearance, comfort, durability and is priced for sound economy. It may be had with either plywood or full upholstered back and seat. Before buying either auditorium or classroom seating, by all means, write for the new Irwin catalog. It's a reliable index to the "Best Buys" in school seating.

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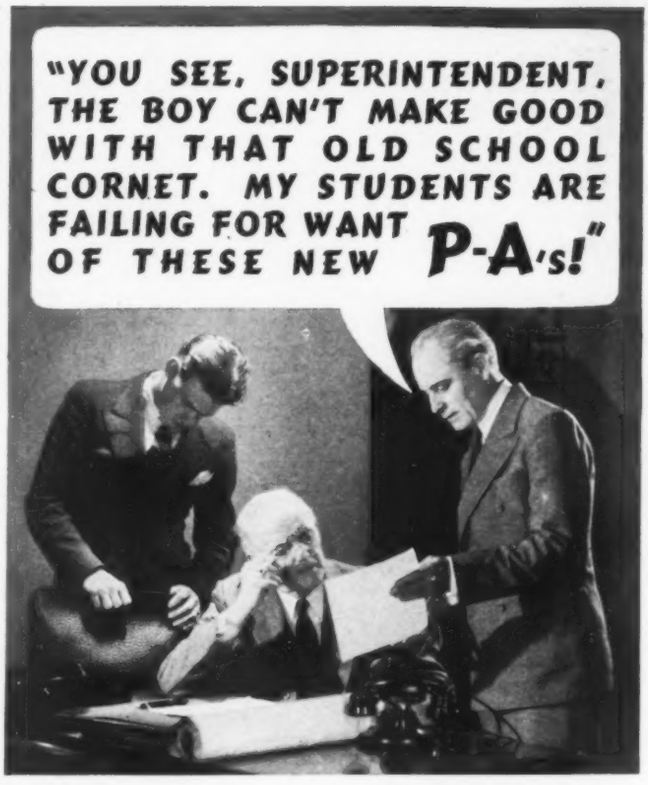
A Symbol that has identified Quality School Seating for more than thirty years.


"YOU SEE, SUPERINTENDENT, THE BOY CAN'T MAKE GOOD WITH THAT OLD SCHOOL CORNET. MY STUDENTS ARE FAILING FOR WANT OF THESE NEW P-A's!"

Don't Let Badly-Tuned, Hard-Blowing, Poor Quality Equipment Hamper the Progress of Your Instrumental Students

It's a delicate subject, but it is true that often persons obliged to select instruments for others to learn to play, who have never themselves played one, may not fully appreciate the hidden differences between good and bad instruments. Poor tone quality, faulty intonation, hard blowing, and sluggish mechanism are not visible to the naked eye. It is also true that a skillful performer can make a surprisingly good demonstration on an instrument so poor that it would stymie any beginner. These facts are of serious importance to the school executive responsible for the successful administration of instrumental instruction.

Pan-American band instruments are of the very highest musical quality; beautifully toned; remarkably accurate in pitch and intonation; responsive and positive in action; beautifully modeled and especially durable. Students make rapid progress in sound musical ability with these instruments. They are the best instruments any school may adopt, from the *teaching* standpoint.

Almost as important, Pan-American instruments are moderately priced. They stand unchallenged—the biggest dollar value in the world of band instruments and every item in the catalog, which includes nearly all brasses and woodwinds, is backed by the strongest factory guarantee. Write us direct for catalog and the name of your nearest dealer. We, and your dealer, promise every co-operation in solving the problems of your instrumental department. 1261

PAN-AMERICAN BAND AND ORCHESTRA INSTRUMENTS

It is not a genuine Pan-American unless the Pan-American name is engraved on the instrument.

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1053 P-A Building ELKHART, INDIANA

LOOKING FORWARD

American Education Week

AMERICAN Education Week as an annual event focussing the attention of parents and other adults on the operation of the public school program has grown to significant proportions. It has been estimated that nearly 7,000,000 parents attended one or more special programs during the 1936 sessions. A large number may have acquired a much better understanding of the school and of its problems in attempting to care for their children in the course of one or two visits. However, such implication is open to reasonable doubt. There are no data on the carry-over effect.

Excellent as this week of celebration may be, it seems in one sense a pity that so much emphasis and pressure are generally placed on five days of school life and the balance of the schooi year almost neglected. Parental interest developed during November may be more effectively capitalized if each individual school would carry over this stimulation into regular visiting days throughout the school year, thus building up a continuing rather than a periodic interest in public education. Even millions of single visits may be just a statistical delusion as so many mass statistics are.

The teaching profession has an excellent opportunity to develop a much more effective interpretative program and also to recognize and stimulate the partnership concept by encouraging and extending the areas of parent participation throughout the school year. The parent-teacher association is one excellent device, but parent organization need not stop here. There are unusual opportunities for the organization of continuing independent parent study groups. The objective of this year's program might well be not merely an increase in the number of visitors but the stimulation of more frequent visiting. As the continuing program develops, the high-pressure special week no longer may be necessary.

Vanishing Tax Sources

THE discussion of vanishing sources of taxation for the financing of state and local programs formed an important part of the recent governors' conference at Atlantic City. The proposed action was a plan for a national conference which is to prepare a comprehensive plan of taxation with specific area allocations to local, state and federal governments.

The trenchant observations of Gov. Herbert H. Lehman of New York State that the federal government has progressively monopolized some of the best tax fields and that, unless this tendency is checked, the time may quickly come when the states can no longer finance local and state programs, when "they would become vassal states and their importance as units of government would disappear," summarized the general tenor of the discussion.

There is much sound sense in this observation. Unless a program can be developed at a relatively early date whereby specific and sufficient fields of taxation are allocated without intrusion or overlapping among the several units of governments, every state will be forced to seek federal aid for all civil and educational activities. When that action becomes necessary, the balance of power and direct control — since power inevitably follows the purse — will pass from local and state governments to the federal congress and the process of centralization will be complete.

An increasing number of federal civil personnel, some elected officers and certain political scientists favor this shift in power as a step toward desirable centralization. The doctrine of centralization is a tempting one but gives little indication of solving some of the problems that have pushed it so rapidly to the front. If the United States is to remain a democracy in the best of our traditional concepts and ideals, it must rest on the capability of the individuals in local self-goverment. Curing alleged democratic failure in primary governmental units by means of centralization of authority places the cure in the category of being more dangerous than the disease. Leaders in the field of public education are urged to consider thoughtfully and much more objectively the implications of federal aid for public education in terms of the programs now before Congress. The form in which this aid is received will be of great significance to the future of education. Support cannot be attained without control. Federal participation in public education might then be profitably limited to those areas — buildings and scholarships —

in which control of instructional policy would be much more difficult than under direct instructional grants.

The governors' plan to bring the problem of centralization through control of profitable tax sources into the open and direct public attention upon the problem both through the creation of public understanding and through a competent planning commission is important. The teaching profession within our states might profitably devote some time to this group of problems.

A Correction

IN OUR August editorials criticism was made of the diamond jubilee program of the National Education Association at Detroit because of a one-sided program, loaded with individuals who presented only industry's viewpoints, while labor was entirely neglected. Our correspondent, usually remarkably reliable, also informed us that invitations to Michigan's liberal governor, Frank Murphy, and Detroit's liberal mayor, Frank Couzens, had been omitted. In conclusion we suggested that the program makers had something to explain.

Since that time Dr. Belmont Farley, as spokesman for the National Education Association's headquarters staff, has informed us that both Governor Murphy and Mayor Couzens had been invited but declined to speak —the governor because of a conflict in dates and the mayor because of the recent death of his father, Sen. James Couzens. We have also been assured personally by both Governor Murphy and Mayor Couzens that these are the facts.

We sincerely regret the error and offer this explanation as apology, giving it the same placement as our original statement. However, after careful study of the N. E. A. explanation of the unbalanced program, we still maintain our original stand that whenever a controversial subject is presented at a convention of teachers, whether it be in education, economics or politics, *all points of view* should be objectively presented without favor or prejudice to a single view. If the principle of democratic fair play is not a policy of these summer gatherings, it should rapidly be made so.

Athletic Reform

SOME thirty years ago we heard a noted Scottish philosopher make a significant analysis of the conduct of competitive athletics in American secondary schools and universities. One of his major criticisms covered the somewhat frantic efforts of schools to build up an intricate system of eligibility rules and thus prevent our presumably ethical institutions from inducing their competitor's best athletes to enroll in their own institutions.

In his estimation this growth of technical rules mitigated against the right of an individual to engage in a sport unless he could show scholarly perfection. It seemed to him just as logical to reverse the process and make proficiency in athletics the basis for participation in academic activity. He felt that the attempt to correlate desirable play and achievement in school subjects was simply one of those unexplainable quirks of the academic mind. There was no need to mix essential play activity with the more purely intellectual activity of the classroom. His final thesis was that so long as an individual was considered worthy to be a member of an educational institution he should be permitted free choice in the matter of participation in sports.

The forward looking program of the New York State Department of Education which proposes, beginning with Sept. 1, 1938, to cut away completely the encircling restrictions that the academic interest has placed on play merits both commendation and imitation. These new rules, as promulgated by the state department under the immediate administrative direction of Dr. Hiram A. Jones, director of health and physical education, recognize as a public policy, for the first time to our knowledge, that play and competitive sport are just as coordinate and integral a part of the secondary school curriculum as any academic subject. Provided that a student is a regular member of a school and has registered during the first fifteen days of the year, high or low academic standing will not be allowed to interfere with his play on school teams. Thus, in terms of a definitely defensible curricular principle, the accumulated academic restrictions on the health education and athletic aspect of a major teaching division are removed. The only remaining bars are years of play and age limits to prevent a school from exploiting its superior athletes beyond their normal span of school membership.

Amateur Limitations

AN INTERESTING instructional project in relating the making of radios to science instruction was presented by Cline M. Koon of the U. S. Office of Education in the September issue of The NATION'S SCHOOLS. Although the stimulus in this case was financial instead of instructional, it showed the possibility of making science instruction in the field of electricity and mechanics of more vital interest to the adolescent. As a laboratory experiment it holds unusual opportunities for other schools to follow; as general practice for everyday school use, certain questions naturally may be raised.

A school building cannot be adequately equipped for sound on a financial "shoe string" regardless of amateur enthusiasm. The use of electricity for apparatus of any kind in a public building represents a definite fire hazard, and most states have recognized this fact by providing through law for definite regulations regarding the method of installation, both with respect to material and quality of workmanship. Rigid inspection in most states enforces these rules in new buildings and also requires specific permits for making changes to existing structures. Unfortunately, many schools do a lot of internal

tinkering contrary to building codes of which legal inspection authority is completely ignorant.

The fire hazard from wiring improperly installed is so great that insurance companies have been legally justified in refusing to pay for losses occasioned by amateur effort. Panic as a result of accidents to electrical systems is naturally just as grave a risk as a fire itself. There has been sufficient evidence over a period of years of disastrous results growing out of amateur attempts at economy in public school buildings. An amateur gas connection produced the greatest school tragedy of the century last spring.

Neither janitor nor enthusiastic teacher nor eager children are capable of providing for so technical an installation of wiring and instrument installation as a safe sound job requires. It is distinctly no work for the amateur. Pupils' experimental activities, so essential to modern educational practice, should be confined to laboratory development and laboratory use. Apparent initial economies in this field have too many possibilities of becoming terrific terminal extravagances. The best advice that can be offered to schools is to purchase equipment that is known to be standard and to provide for installation in accordance with the legal and insurance underwriters' codes covering these practices. It may not always be possible to obtain the most complete results at the outset in this manner, but it is a means of reducing hazards and preventing possible accidents. There is a field for the amateur and a field for the professional. We advise that the amateur be restricted to his normal area—the laboratory and shop.

Good Fences

IN ONE of his homely songs of Vermont life, Robert Frost wrote that "Good fences make good neighbors." Those miles of stone wall separating New England farms and fields prevent livestock from straying out of bounds and engendering neighborhood conflict through damaging trespass.

Our song is also about "good fences" of a different type but for a similar purpose. As many school-neighborhood conflicts are analyzed back to their origin it almost appears as if administration had never heard that "good fences make good neighbors." In their efforts to interpret the schools to parents and other adults, much work is spent in the "front yard" planning programs and publicity campaigns. All sorts of efforts are made to propagandize the community to a realization of public education value. Yet the "back yard" is too often neglected and forgotten. From this back yard grow many difficulties that may neutralize the best front yard efforts.

It is our thesis that a well-kept building, a site sufficiently large to furnish a setting, adequate play space and a strong fence to give protection to the neighbors are just as significant, potent and essential agencies in the interpretative activity as a continuing publicity.

Our community schools represent relatively large concentrations of juvenile population. No one expects that these children can remain motionless or silent. On the other hand, individuals who live close to school property are too frequently annoyed by both noise and activity. The typical school site is much too small for adequate play. It is almost completely lacking in trees, shrubs and vines that form not only a protective screen between institutions and adjacent homes, but also have acoustical value in reducing playground noise. The typical site is also too frequently devoid of a good strong fence, so designed as to discourage climbing, strong enough to serve as a protection against play equipment being thrown or booted into neighbors' gardens, and high enough to protect near-by windows from accidental breakage.

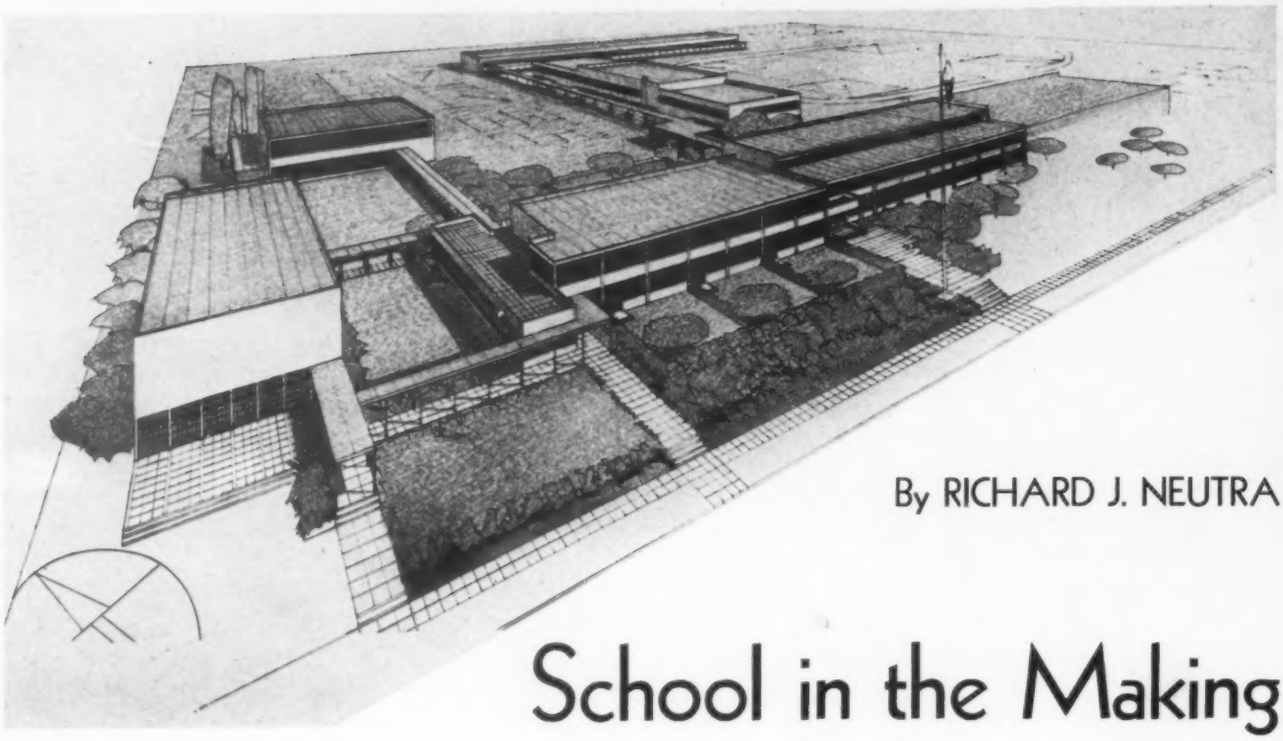
Many superintendents and board members believe good fences cost too much. All cost is relative. If the expenditure of several hundred dollars to provide protection for the neighbors can prevent the development of bitter attitudes toward the institution that may ultimately be reflected in the community support of schools, the cash outlay cannot be classified as extravagance. Economy that consists in stringing a few isolated strands of wire to cedar posts instead of using strongly woven steel mesh may, over a few years, actually be a great extravagance since these makeshift fences do not prevent neighborhood conflicts. Expenditure must always be considered in relation to purpose instead of merely as a price.

Many experienced administrators believe that adequate fencing is worth much more than many other aspects of interpretation. With this view we cannot agree but cheerfully admit that the inclusion of adequate fencing will fill a long overdue need in a complete community relations program. Good fences do make good neighbors.

Education in the Depression

THE Educational Policies Commission has recently published two monographs that deserve a place in every professional library. The first covers "Research Memorandum on Education in the Depression," prepared for the commission under the direction of a special committee of the Social Science Research Council. It lists a number of significant problems for study of the effects of the depression on public education. The second includes a reasonably adequate bibliography on educational writing related to the depression effects on the schools, prepared under the direction of Prof. Jesse B. Sears, on leave from Stanford University last year for that purpose.

The Editor



By RICHARD J. NEUTRA

School in the Making

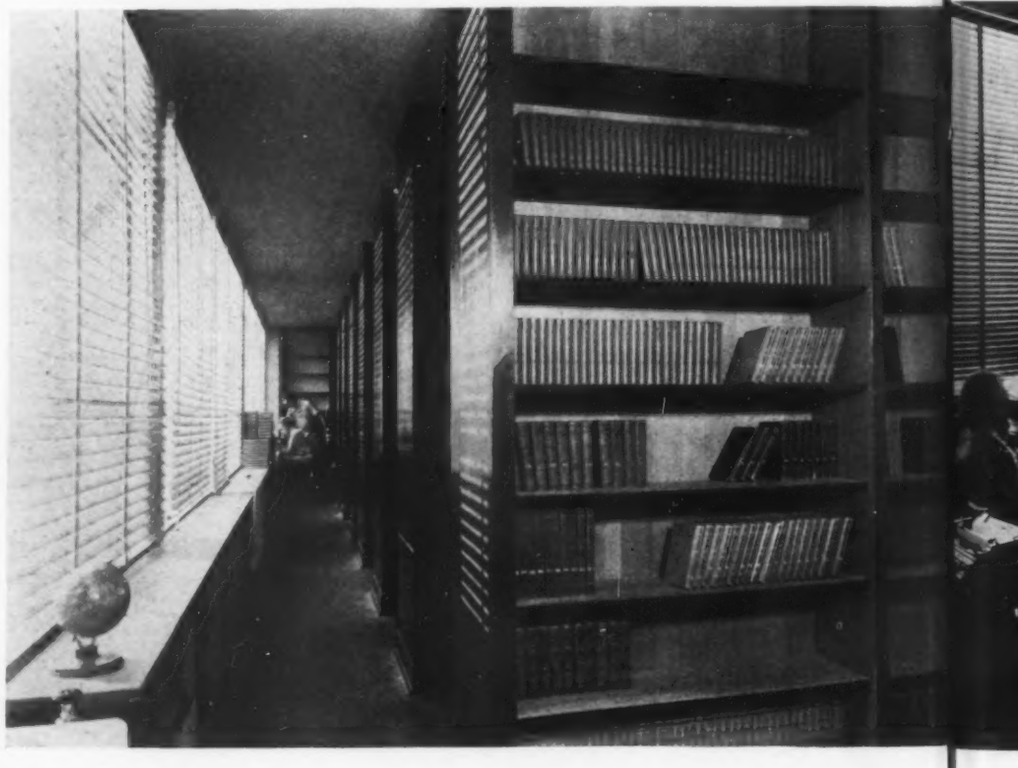
THE Ralph Waldo Emerson School is situated in the quickly growing Westwood district, surrounding the University of California at Los Angeles. Temporarily housed in bungalows, its enrollment increases so remarkably every year that even the construction of the first portion of a permanent plant will hardly bring relief. The bungalows remained and will remain in use until the building program will have proceeded to further realizations. Much of its completed form and significant landscaping is thus still to be anticipated.

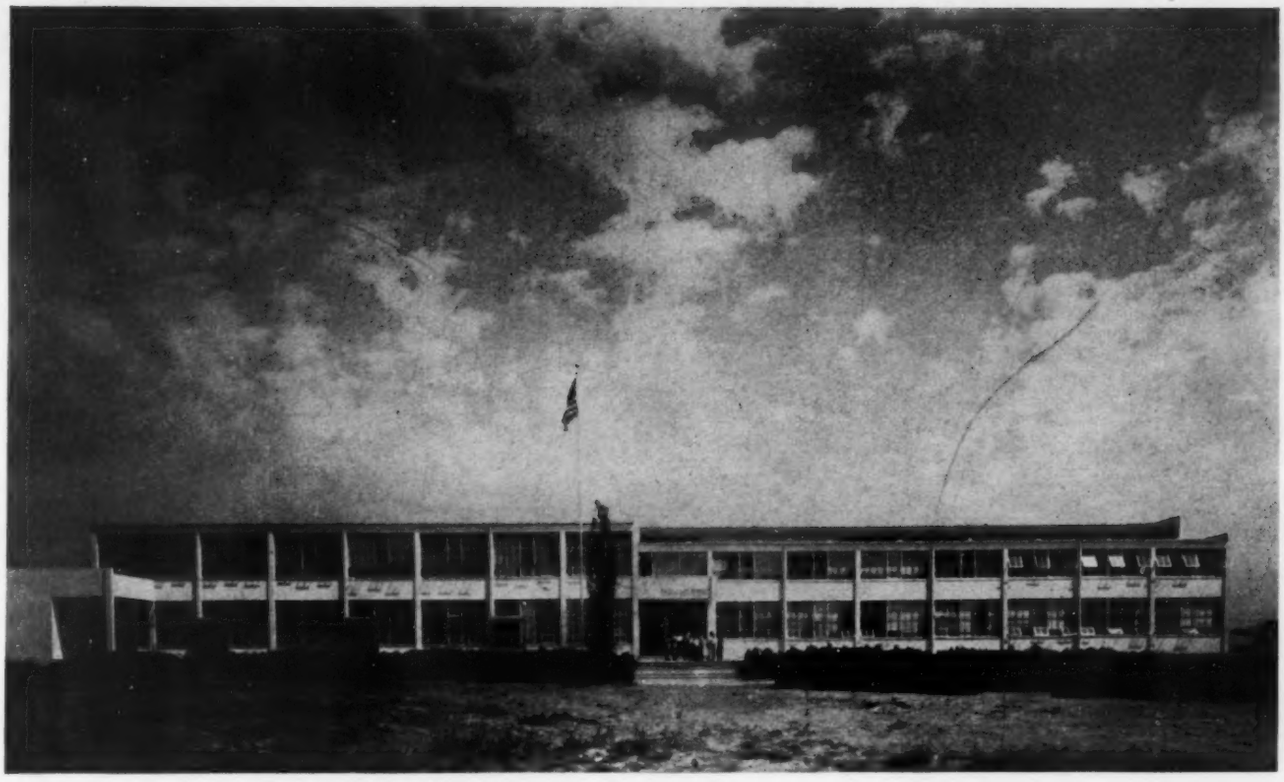
Having construction work surrounded by a functioning school has disadvantages both for the building work and for the educational activities. But, there are compensations!

The architect enjoys the daily contact with educators and pupils, whom he can watch at their work and whose housing has become his problem. Insufficiencies of the temporary plant are an instructive lesson to the planner. He can profit from the comments of the school people, who like real clients, study the blue prints by looking over his shoulder and observe the project while it is taking shape. It becomes clearly and convincingly intelligible to the ultimate consumer of this commodity in the making—a school plant.

The children are fascinated by what is going on. All of them know that this is the building where they will spend their next year. They feel themselves to be owners and are flattered by the great apparatus and by the legion of diversified adults set to work on their behalf.

Realizing that good and suitable architecture at no time may be accomplished except with the enthusi-





Front view of the steel framed Ralph Waldo Emerson Junior High School, West Los Angeles, Calif., designed by Richard J. Neutra, architect.

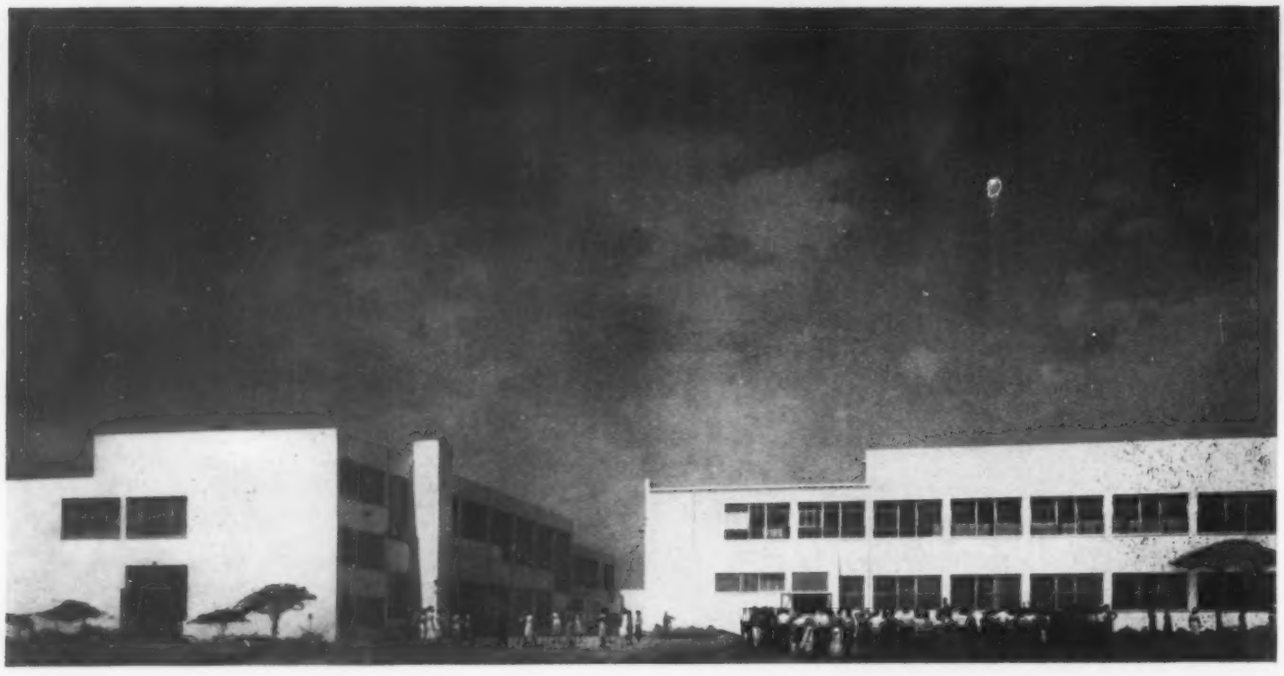
astic attention of those concerned as consumers and owners, we producers, as well as the future users, soon ceased to be annoyed by the friction caused by building operations going on in the midst of a busy institution of learning. The noise of steam shovels, concrete mixers and riveting machines could not be silenced, but became a stimulus to arrange a whole year's experience training around this vital event of building, of building a school plant, our school plant!

Teaching in a purely academic way may be disturbed by noisy life, but modern education has neighborly relations to life, sees in well organized, real work around the classroom a most valuable object lesson, leading to ramified inquiry, observations, discussions and training of critical faculties.

It soon became clear that building a school plant right in plain view of teachers and pupils was an educational venture of the first order. The architect was asked by the principal, teachers and student body to deliver explanatory lectures on plans, construction and objectives. He was asked to answer questions about earth shocks, illumination, routing of internal traffic, landscaping, color schemes.

The teachers of art, natural science, mathematics and social science and the librarian found it a convenient starting point to speak about the beauty of form, color, light and shadow, of measuring a plot, geomet-

Large glass areas set in steel sash and provided with aluminum coated Venetian blinds permit any desired degree of illumination. To the left is the typewriting room. On the opposite page is the textbook room, adjoining the library.



Architect and educator joined hands to bring this beautiful plant into existence. It is indicative of the renaissance in schoolhouse design.

rically laying out a site, digging foundation trenches through geological strata. Other study centered around the socio-economic problems, problems of production, labor, manufacturing auxiliaries of building, federal financial aid, its causes and purposes —broadening the subject from this school project to include the endeavors of the far away Tennessee Valley Authority!

History of architecture and the arts in their relation to ways, means, purposes and mental make-ups of past and present, organized cooperation in ancient and recent times aiming at a productive end was exemplified by this building. Interferences between this project and broad movements on the outside—such as the strike of maritime workers, sailors and longshoremen which retarded shipping of rolled steel sections for months—could be interpreted to the pupils as an elucidating incident of the need for economic planning and adjustment on a large scale.

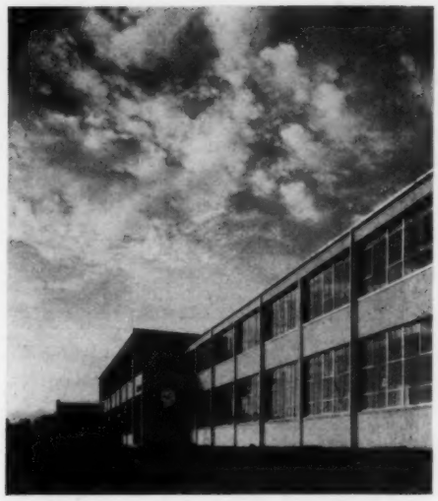
One teacher enthusiastically reported an intensive research carried on by pupils about the manufacturing and industrial revolution, including the biographies of forty-three contributors to it, from Johannes Gutenberg to Charles Lindbergh! Hence, many problems were introduced, many questions were brought up and dealt with, while the skeleton of the new school plant grew higher from week to week. Meanwhile steel sash and glass were carefully unloaded from trucks, asphalt roofing was laid, rows of shower stalls and plumbing fixtures were installed and inspectors discussed matters with superintendent and contractor. For the pupils the entire project grew into a vast unit of experience with almost universal implications.

Members of the Los Angeles board of education invested their personal interest and the architectural division of the Los Angeles board of education contributed from its great treasure of experience. Parents learned to watch the construction with an attention similar to that of their children. Thus this project of a school became a true community affair.

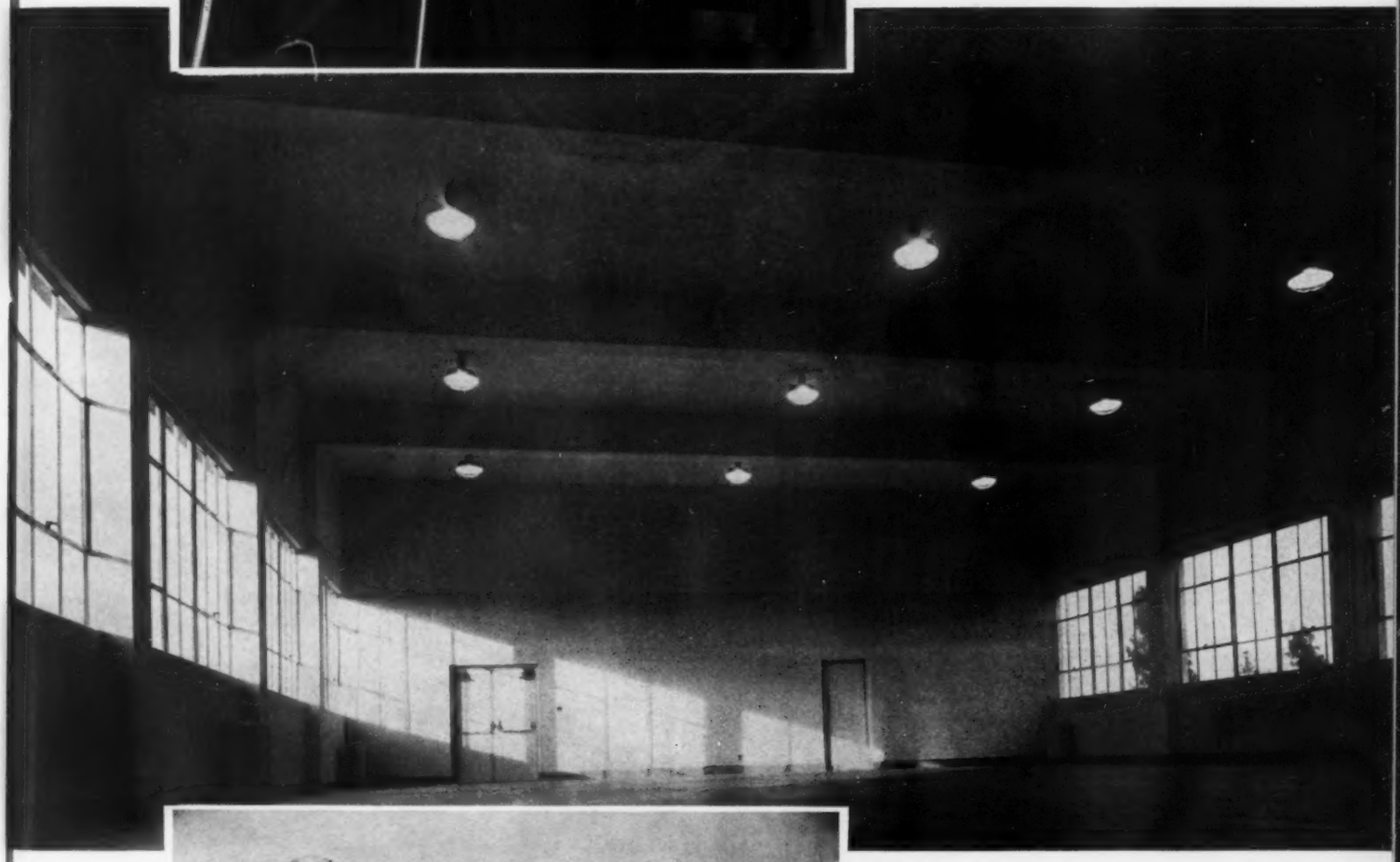
Plans had been evolved and elaborated for an earthquake-resistant, steel-framed structure, which would serve the progressive tendencies in today's educational procedure. Large glass areas set in steel sash and provided with aluminum coated Venetian blinds permit any desired degree of daylight illumination. Doors from the social science rooms and from the well-equipped art department open up to outdoor instructional areas—patios intimately attached to the indoor classrooms. Several of these exterior doors are of a sliding type, 16 feet wide, so that the landscaped outside patio and the classroom are welded into one useful area dedicated to more space-taking activity training. Without increasing the costly building cubage, the instructional area was enlarged by 30 per cent. Space was gained for group movement, dramatization and setting the instructional scene, without adding to the building price. The art department is so situated that its projects are easily extended to the stage of the future auditorium.

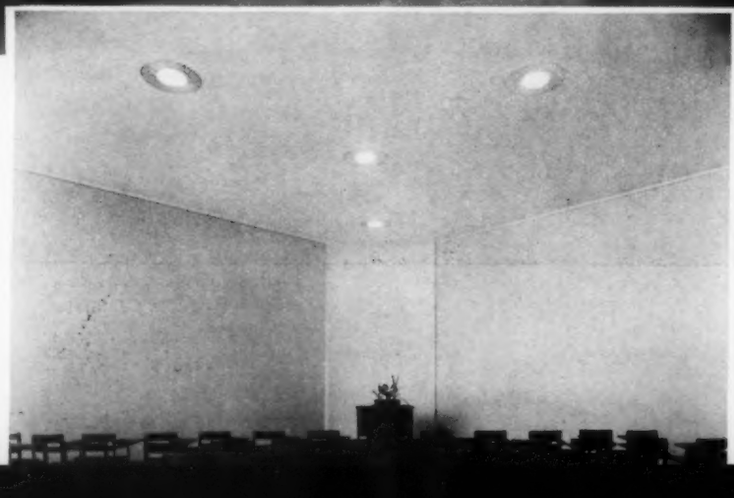
The carefully organized administration offices for principal, vice principal and counselor—a testing room, now of an ever-increasing importance to guide pupils, teachers and parents —together with attendance and student body offices all are accessible at the side of the central entrance lobby. All of the rooms have private intercommunications and waiting rooms. These and the study rooms for business training and typewriting make up the ground floor area. Five wide, brightly illuminated stairhalls connect with second floor levels.

The upper story, necessitated by a restricted plot, contains the rooms for academic and natural science study, which are made more useful by adjoining workrooms. Situated on this floor is the music department with



Building a school plant right in plain view of teachers and pupils is an educational venture of the first order.





Three interior views show daylight flooded stairhall, physical exercise room and a special classroom. The oral English room makes a nice geometric pattern with its diagonally arranged stage and seating.

instrument, score and record storage chambers and adjoining spacious roof decks for outdoor choirs. On the same floor also is the oral English and recitation room which has a novel diagonal arrangement of stage and seating. The library with clerestory windows, further offices and busy workrooms occupy part of a new longitudinal layout, which includes comfortable rest rooms and balconies for teachers of both sexes, conference and seminary rooms and a textbook room. The lower roof and ceiling of this wing not only decreases the building cubage, but also gives coziness to these smaller rooms and permits the light from the clerestory windows to reach the library.

A physical education unit with bathing facilities, daylight flooded exercise and relaxation rooms and offices for doctors and nurses takes advantage of the latest standards developed from recent experiences in the Los Angeles high school district. All surfaces are plain and washable.

Wall colors in general are a cool light blue-green in all rooms with ample sun radiation and warm light yellow where light is diffused. Brown linoleum and aluminum coated sash and exterior doors harmonize with both sets of wall colors. The exterior scheme, light cream on concrete and heat reflecting aluminum on all metal work, gives a good background for shrubs and flowers.

A fundamental thought in designing this progressive school plant was to divert the available funds to the fulfillment of purely educational needs. It is a building created as far as possible for the benefit of the significant activity of the teachers and of the children. No mere "machine for education," the plant will, in spite of its straightforward simplicity, when endowed with its preconceived garden setting, command its good measure of beauty. Not the static beauty of an architectural monument for itself, but that of a building in pleasant use, that of a stage for all-around educational life, actively experienced.

Sitting quietly for hours and merely listening have been found to be a requirement incommensurable with the child's nature. But if it is true that a child can more successfully sustain fertile concentration when active, and not merely receptive, our old type classroom proves unsuitable and lacking in esthetic appeal. With its fixed seating arrangement caused by one-sided fenestration and light from the left only and with its cramped floor area resulting from economy in the building budget, the traditional classroom is the exact contrary of a modern activity room. The new classroom is a room for the productive life of children, who learn while they work. A room for living work is crippled if it does not permit movement and flexible rearrangement for ever new patterns of procedure. It becomes far more attractive if a whole glass partition slides aside and opens each classroom on to its shaded patio.

Work and its products are most beautiful if the ingredients of imagination are not frozen by cramping restrictions on the one who works. Work growing out of an imaginative urge is as beautiful as the most beautiful play, and to see a group of children with their enthusiastic interest engaged in such an activity is indeed an inspiring sight.

There is hardly any building that has a worthier, more significant function than a structure in which and by which we like to influence the growth of a coming generation. The school plant is such a building. We may still lack the power to control the lightless home environment of the children of slum dwellers, but if we earnestly try, we may surround them in school with healthy purity and a higher order of esthetic appeal.

Among the most important departures from standard school plans are the social science rooms with their outside patio for activity training.

A Case of Cheating

By HAROLD S. CARLSON and ELEANOR SALTZMAN

What to do with Little Ronald of 6A! Teacher has caught him red-handed. Two members of the staff of the Iowa Child Welfare Research Station discuss Teacher's and Ronald's embarrassing predicament.

LITTLE RONALD is in disgrace. Teacher stands above his desk where he cowers, small, withdrawn far into his sweater. She has caught him cheating. He has not the slightest idea what she will do with him — send him to the principal's office, expel him, flunk him on the test or give him another chance? He thinks of Jerry Spencer's carefully cribbed papers and knows, too, that at the back of the room Ellen Louise has been helping Punk.

How Serious the Crime?

Yes, Ronald has cheated and been caught. But he is far from being the first youngster to be discovered cheating in an examination, and he certainly will not be the last. Every year thousands of children "get by" in school the best way they can. Thousands of teachers have to decide how serious is the crime that has been committed. How important is it? Whose fault can it be, Ronald's or her own? Can the whole educational system be to blame? Or perhaps some less tangible factor is operating, like that long-suffering force, human nature.

The fact that Ronald cheated does not necessarily mean that he is setting his feet on the road to delinquency. Perhaps tomorrow's embezzler does cheat today in school. But tomorrow's trusted merchants and teachers and doctors also consult their neighbors occasionally, sub rosa. Many a college student attempts to get through any way he can in a required course in which he has little interest, yet labors overtime on something else that seems to take him where he wants to go. Cheating, by itself, probably tells little about a child's future character development.

Pupil attitudes toward honest school work must be regulated. Merely preventing cheating does not solve the teacher's problem. Her task is the creation of an atmosphere in which dishonesty is unthinkable, rather than a situation in which it is literally impossible.

It is a matter of group personality that the teacher faces. She meets pupils individually, but there is always something else fundamental for her to consider—the class as a whole. She has to keep that class within certain bounds, following a certain orderly pattern and accomplishing certain definite stints in arithmetic and reading and geography as the curriculum provides.

Now little Ronald has been caught red-handed. It is the first time she has found him guilty, and she knows that with half a chance he will make a good, solid citizen fifteen or twenty years from now. She knows why he did not know the facts about the colonies and had to look them up. She could do a number of things in a very different way, if she did not also have to be aware of the twenty or thirty other Jerries and Ellen Louises behind her who go to make up the Sixth A.

No Lack of Suggestions

Many people outside the classroom will have ready-made suggestions for Teacher about little Ronald. Expel him, scare the wits out of him so he'll never do it again, flunk him, keep him in after school for the next six weeks to study, go to see his parents, don't notice when he cheats—any one of a dozen remedies are offered from parents of good and bad, smart and dumb little girls and boys, as well as from psychologists, ministers, mental hygienists and fellow teachers of old and new schools of educational thought, all of whom are ready with suggestions.

And then there are others who accept the fact that Ronald cheated and try to discover some of the reasons why it seemed necessary or desirable for a little boy to copy the answers from his book. By their studies they hope to find something that will help teachers and children and parents meet their problems for the good of all concerned.

There are various angles of the question to study, and various ways of studying them. Lately psychologists have been turning less toward the individual aspects and more toward the group phases of the problem. They emphasize, too, the importance of the teacher's personality, particularly as reflected in certain personal and professional attitudes, in the way codes and morale develop within the classroom.

Unite these two angles and you have the point of attack of one such study reported recently by the first author of this article.* How do teachers and their pupils feel about cheating? How do these relate to each other and to cheating itself?

Cheating Test Is Given

Approximately 1,500 boys and girls in fifth and sixth grades in eight Iowa cities were given a cheating test, and both they and their teachers recorded their attitudes. Several

*Carlson, Harold S.: Teachers' Attitudes in Relation to Classroom Morale and Cheating, J. Exp. Educ., 4: 154-213, 1935-1936.

months later they were given the same test a second time to see whether there had been any changes.

The cheating test was a list of questions, the hardest too difficult for graduate students and the easiest answerable by fourth grade children. After they had taken the test, the children scored their answers by a key booklet. If any youngster answered the difficult questions right, it was apparent he had cheated. In addition, the children answered seventy questions about their attitudes toward the teacher, the class, school work, working for marks and cheating in school, giving not only the way they felt, but how they thought they ought to feel, how they thought the class felt, and their ideas of how the teacher thought they ought to feel. The teachers were asked to check the importance or lack of importance of fifty common behavior problems and to express views about using blame to make pupils change their ways and about stressing school marks to make pupils work harder.

Most of the teachers proved to be rather lukewarm toward the use of blame when children misbehaved or did poor work. They slightly favored emphasizing school marks to stimulate effort, and were inclined to think that most of the common behavior difficulties were serious matters. They disagreed with mental hygienists as to how serious these "crimes" were, looking upon them with much graver countenances than did psychologists who viewed them. The way they felt about cheating exemplified this—it was indeed a serious offense.

Where Cheating Diminished

The pupils were equally convinced that they ought to feel the same way about dishonest work. Most of the classrooms seemed to be favorably disposed toward their teachers and school work and opposed to cheating. The cheating itself scattered. It wasn't evenly distributed, nor was it either entirely present or absent — there was more or less of it in all classrooms.

Under certain conditions cheating seemed to diminish. This was true when the pupils felt increasingly in step with their school work and with their teacher as a person and respected her authority. Less desire to work for marks had the same effect. Along with this strengthened morale as regards work and teacher, a weakened morale with respect to cheating itself seemed to go with a decrease in the practice—a less united opposition to it and a decreased confidence that everyone in the class was opposed to it.

Likewise, if the teacher did not believe in blaming or shaming the pupils into better behavior and if she did not constantly hold up school marks as an incentive to good work, cheaters became fewer. The same situation obtained if she thought most ordinary behavior problems were serious matters from the standpoint of the children's future welfare. One implication is clear—the growth of a "gang" spirit of antagonism toward the teacher and toward school work, with a subsequent "rationalizing" and "universalizing" of cheating, is a rather rare occurrence.

Typical Teachers, Typical Classes

These teachers and classes probably are typical. What would have happened if their teachers had been less capable and more "reactionary"? What could a teacher do who really opposed blame, who never held up school marks as a goal, who saw eye to eye with the mental hygienists in their approach to behavior problems, however rare and difficult such an approach may be? We don't know. Our teachers were ordinary teachers with ordinary classes.

It is not easy to be a teacher, a really good one. It is not easy to stand above little Ronald's desk and try to act wisely, both for Ronald and for the whole class. For the class is a kind of unit, with a personality of its own. This the teacher knows. People working somewhere else can try to tell her what is wrong and what she ought to do. But she is the one who has to meet her class, keep some kind of order, teach twenty or or thirty youngsters any number of things, and still meet some of the individual needs of the children. She needs a stout heart and eternal vigilance to maintain in the face of confusing advice a confident, consistent philosophy of teaching which permeates every contact with her pupils.

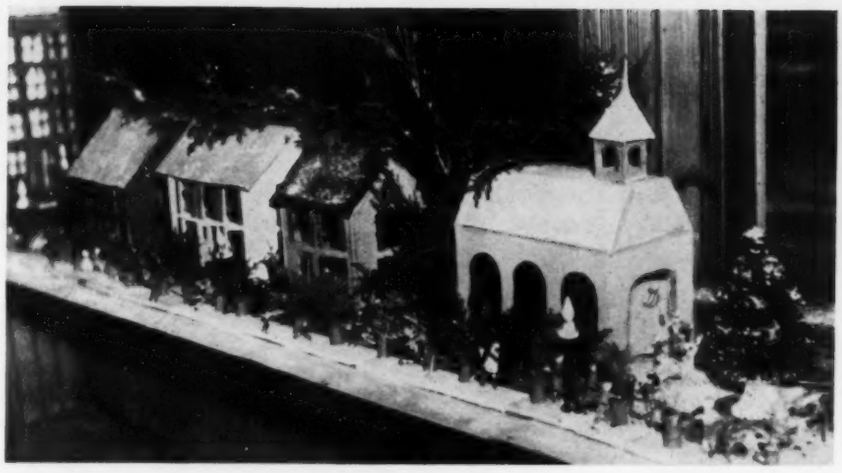
She needs help, the right kind of help, to promote the character and personality development of her pupils. There are general principles laid down for her guidance, but most of them are too abstract or not based on actual experiments. Many of the studies concern only limited aspects of character and personality development. The mental hygiene clinic deals with children individually and too often does not need to face directly the problem of group morale. Large-scale long-time studies within actual classrooms would help in managing both Ronald and the class of which he is a member.

What Teacher Might Do

Little Ronald has cheated in a history test. But Teacher knows that there are others who are doing it and haven't been caught. Teacher must decide what to do to the culprit. Perhaps after all it's partly her fault, for "when the class is in step with the teacher as a person and with the school work," cheating is on the decrease. She also must try to do something for Sixth A. Offenses here seem serious to her because she has to keep Sixth A as a whole on the upgrade. It is more than a question of one pupil imitating another. It is a matter of subtle group morale or spirit, what they expect one another to think, feel and do in relation to the teacher, school work and cheating.

Perhaps she fails Ronald on the test. Perhaps she gives him a chance to talk to the principal. Most likely she talks to him herself after school, sympathetically and frankly, and makes him pay, in a failure on the test, for this slip. But she does not try to bring him to terms by shame or blame either publicly or privately administered.

After he has gone she probably spends a long time examining herself and planning activities that will weld the class together in a spirit of happy cooperation. It may be that what she has to overcome is the accumulated effect of the pupils' experiences together under previous teachers. But that is more or less beside the point. Whatever she does, she remains conscious of her responsibility to her class, her Sixth A, a responsibility which goes far beyond a knowledge of the facts of the Louisiana Purchase, however important that may be to embryo American citizens.



Primary children made this street, with houses, stores, a church and a schoolhouse, as a part of their study of the community. When Christmas came they put up a community tree, gaily lighted and decorated it.

Decorating for Christmas

By GEORGIA DAVIS

OF ALL the seasons of the year, Christmas is perhaps dearest to the hearts of children. In many places, the whole community is ablaze with life and color. In practically every home, a supreme effort is made to provide something different for Christmas. The school, no matter whether it is a one-room school on the prairie or a great modern city school, always feels the thrill of the holiday season.

One of the most enjoyable tasks of the Christmas season is that of decorating the school plant. The whole task provides a fine chance to participate in a bit of real community living as well as to learn how to do the job well. We have but to look about us at the Christmas season if we wish to see excellent examples of how decorating should not be done.

Creating a Center of Interest

In decorating a school plant, either large or small, the entire plant should be taken into consideration. This includes the corridors, the auditorium and any other space that the school uses as a whole. If this is not done, each room often becomes a unit with its own type of decoration and the building loses the grace, beauty and dignity that it should have. Large wreaths at some doors, small ones at others and none at others, for example, give a long corridor a spotty appearance displeasing to one passing through. On the other hand, a small wreath of natural greens hung at every door makes a long corridor beautiful.

In planning the decorating of the school plant as a whole, a center of interest or a series of centers of interest is important. In a small building, it is possible to plan the decorations so they will lead to one center of interest while in a large building it may be desirable and necessary to provide more than one, depending upon the position of the rooms and the open spaces available.

A tree, while not essential, is a most interesting center of interest. It should be placed where the greatest number of boys and girls can enjoy it as they pass through the corridors or look out of their doors. It should be as large as the space will permit and an effort should be made to trim it as beautifully as possible. Expensive decorations are not necessary although every school plant should own some choice decorations that can be stored away and used other years.

One of the most beautiful trees I ever saw was decorated entirely with silver painted cones and narrow strips of white tissue paper. On this tree there were many bright lights of every conceivable color. A lighted tree is particularly beautiful if it is placed in a dark part of a corridor. Many children do not have the joy of a lighted tree at home and one has only to watch a group of children as they gather around a lighted tree to realize how much it means to them.

The school plant as a whole should be taken into consideration in planning holiday decorations, advises the assistant superintendent of schools of Richmond, Ind. Her ideas may be adapted to both small and large school plants.

Unity of Materials Essential

In planning the decorations for a building the materials out of which the decorations are made should be considered. There should be a uniformity of material if one is to experience a feeling of fitness to purpose. A mixture of paper and natural greens fails to carry out the unity of material essential in decoration.

In planning the decoration of a building care must be used so as not to decorate too lavishly. Too much decoration detracts from the centers of interest and gives one the feeling of a maze instead of a well thought out, pleasing whole where every item has its own use.

The building project, whether large or small, offers an unusual opportu-

nity for pupil group planning and execution. A committee consisting of a representative from every room should be in charge. If the school is fortunate enough to house pupils of a wide range in age, this committee work will be particularly valuable. The young children and the older ones should work together, each getting something from the other. This committee should formulate plans well in advance of the Christmas season. Each room should have something to do with the decorating of the building as a whole. The representative from each room can carry back to his group a report of the plans and the requests. A room might be asked to make a wreath according to certain specification, to bring in some greens or to provide a pupil to help decorate the building. If this is done every room will have a share in the project as a whole.

In the individual rooms most children get their greatest opportunity to share in the Christmas festivities. In planning the decorations for an individual room, the pupils should keep in mind the plans for the building as a whole. They should also be helped to see the advantage of planning for the whole room.

Pupils should be guided away from some of the common practices. Every one of us has stepped into a schoolroom about Christmas time to find the windows almost covered, sometimes with heavy paper pictures and sometimes with a coating of bon ami so heavy that it is impossible for any light to enter. In decorating a room, it is well to remember that windows are there to provide light and sunshine.

Children Should Make Decorations

A well decorated room, no matter how small, has a center of interest and all other decorations lead directly into that center. While, as in the building as a whole, a tree makes a pleasing center of interest it is not essential in a classroom. A well placed bulletin board can become the most important spot in the room. One group of kindergarten children made decorations for a tree. While they were working, the decorations were displayed on the bulletin board. The children liked the bulletin board so well they did not want a tree. A room corner can be made the center of interest. A reading corner is often used in this manner.

Insofar as possible the boys and girls should make some, if not all, of their decorations. The decorations should be the result of experimentation with materials. The great amount of hectographed material that is placed in the hands of young children to be colored, cut out and pasted should be discouraged. Dictated work is equally as bad. Everyone can recall the deadening experience of seeing forty-five grade school pupils turn out forty-five identical Christmas boxes. Any pleasing bit of decoration that has been created by a pupil should be accepted. It is at least on the performance level of the pupil who is working.

Kindergarten children like their trees well loaded with handiwork.

Pupils both young and old should be provided with a variety of materials to which they can go freely. Drawing, crêpe, tissue and cellophane paper in many colors, some sheets of gold and silver paper, paint of many bright hues, string, dried pine cones and weed pods, paste, clay and crayons are examples of materials that lend themselves to the making of room decorations. If children are allowed to try their hands at creating, to move freely among their fellows, to observe decorations that have been completed, and if they are given help when they need it, they will produce something of real value. The things they make will be as different as the children themselves.

To a kindergarten child, a bright colored circle is a ball, but an intermediate grade pupil will not be satisfied with anything so crude. The colored paper chain that becomes so standardized in some schools, becomes a thing of great variety in a school when pupils are allowed to try their hands at creating. A primary child is pleased with a little open box of bright paper, a junior high school boy made a box with tiny peep holes in the sides. A kindergarten group cut bright strips of cellophane and tied the strips together, fluffed them out and hung them on the tree.

Decorating the Tree

Choosing a tree for a room should be done with the group in mind because the pupils themselves should decorate it. How many times have you seen adults or older children trim the family tree while the little ones were told to stand back and not touch the pretty tree. The school tree should always provide a place for the children to experience the joy of decorating. Upper primary and intermediate grade children are willing to have the best decorations chosen for a tree but kindergarten children are most happy if they all hang what they make on a tree. For this reason a kindergarten tree is inclined to be much overloaded.

The Christmas Day decorations may be an outgrowth of a larger room interest that has been going on for some time. One primary group had been studying the community. A street had been made with houses, stores, a church and a schoolhouse. The children decided to put a community tree in their street. They lighted it with tiny lights and decorated it. They made characters to sing around the tree. The street became the center of interest in their room.

An upper grade group was much interested in Christmas literature. They read a great deal. They dramatized many of the stories. They made books illustrating the characters. They decorated their room with the characters in their stories as central figures.

No building or room needs to be the same year after year. Each year's decorations should depend upon the interests and abilities of the pupils making up the school world in which they happen to be living.

New Laws on State Education

By M. M. CHAMBERS

State systems for adult education, provision for the handicapped and better professional training for Negroes are among the school legislative advances summarized by Mr. Chambers, specialist in school law.

THE establishment of new junior colleges, better provision for the professional education of Negroes and the inauguration of state systems of adult education are among the school legislative advances of 1937. Various minor changes in the organization of state and local school control were also made and some new facilities for special education were provided.

Kansas passed an act defining the healing art, laying down general qualification for persons seeking licenses to practice and providing that the state board of education shall examine the qualifications of such applicants.

Maryland established scholarships to enable qualified Negroes to attend institutions outside the state for graduate and professional courses if facilities equal to those for white persons are not available to them within the state. Alabama authorized the granting of free scholarships in certain schools of the state, the cost to be derived from donations to be paid by the state department of the American Legion.

Establishes Graduate Schools

West Virginia permitted the authorities controlling state-supported higher educational institutions to establish such graduate and professional schools and courses as are practicable at the State College (for Negroes). Authorization was also given for extension work in agriculture, home economics, mining, and other subjects to be conducted among the Negro population by the State College, and a state 4-H camp for Negro boys and girls was directed to be established at some point accessible to the college.

Arizona permitted the two state teachers' colleges at Flagstaff and Tempe to establish and conduct graduate courses leading to the degree of master of arts in education. Washington changed the names of the three state normal schools, which formerly bore the names of the towns at which they are located. Utah created the Carbon County Junior College and appropriated $150,000 for the erection of its buildings and $27,000 for its operation during the ensuing biennium. Kansas passed a special act providing for establishing a junior college at Highland.

North Carolina empowered the state board of education to make rules for the establishment and conduct of schools for adults as part of the public school system of the state under the supervision of the superintendent of public instruction and made an annual appropriation of $25,000 for the purpose.

Plans Courses for Adults

In Utah the legislature appropriated $15,000 for adult education under the administration of the state board of education and authorized local school districts to inaugurate adult education enterprises commensurate with their own financial ability. California amended and made more specific the statute establishing a civic center in every public schoolhouse.

In Arizona the research division of the state department of education published a report of a cooperative study showing the community center extension activities of the elementary and secondary schools of the state. Maryland authorized the county commissioners and city councils to establish and maintain reasonable facilities for public recreation, either directly or by contract.

Washington established a Western State Custodial School for defective and feeble-minded persons. This state also provided for the permissive establishment, on petition of a majority of the school directors of two or more adjoining school districts of the second or third class, of remedial schools for pupils who are handicapped and who require more individual instruction. If such remedial schools operate approved transportation routes, the state will pay 80 per cent of the cost.

West Virginia directed the admission of idiots, imbeciles and morons to the training school at Spring Run near St. Mary's. Persons suffering from epilepsy, tuberculosis or leprosy are excluded and preference is to be given to children between the ages of 7 and 14 of the moron type, who are capable of being trained. Those showing improvement so they no longer constitute a menace to society may be discharged at the discretion of the training school superintendent. Idaho appropriated $6,000 for prison education, to be administered jointly by the state board of prison commissioners and the state board of education.

Facilities for the Handicapped

New York created a temporary state commission to examine, report upon and recommend changes in the facilities for the care of hard-of-hearing and deaf children and children liable to become deaf. California passed a resolution commending the state personnel board for admitting to civil service examinations physically handicapped persons whose impairment is not inconsistent with the duties of specific positions. Both public and private employers were

urged to give unprejudiced consideration to the employment of such persons on the sole basis of qualification for the work.

Arkansas reconstituted the state board of education, abolishing the election of members by popular vote and substituting appointment by the governor, who was also made a member of the board *ex officio*. Florida authorized the complete revision and codification of the school laws, as a result of the labors of a school code committee of twenty representative citizens appointed by the governor in 1936 and reappointed with some changes in 1937. This committee has issued a report containing recommendations regarding the constitutional provisions for education and the statutory basis of state and county school systems.

Nebraska proposed a constitutional amendment which would make the superintendent of public instruction a member of the state board of educational lands and funds. The board is now composed of five other state officers *ex officiis*. The legislature abolished the statutory office of the state land commissioner and directed the board to employ an executive secretary to replace him.

Regulates Proprietary Schools

New York required all private trade schools to obtain a license from the state board of regents through the division of vocational education of the state education department and provided that licenses so obtained may be revoked for cause. Wisconsin also enacted a new statute for the regulation of proprietary schools.

Maryland directed the governor to appoint the Maryland Youth Commission, to consist of not more than fifteen persons to study the report of the American Youth Commission of the American Council on Education resulting from its survey of the status of youth in Maryland, this to be submitted not later than Dec. 31, 1938, with recommendations and plans to meet existing needs. North Carolina directed the governor to appoint a commission of five members of the current general assembly to study the state's colored schools and colleges, and report with recommendations to the next general assembly. This state also authorized the appointment of a commission to study teachers' retirement and report its recommendations to the next legislature.

New Hampshire set up a commission composed of the commissioner of education and two other residents of the state to inquire into the possibility of savings being made by centralized purchases of school supplies.

Pennsylvania provided that the county executive committees chosen by the directors of all school districts under the jurisdiction of the county superintendents shall hereafter be known as county boards of school directors, with authority to inspect budgets, approve transportation routes and contracts, recommend school sites, establish uniform systems of accounting under the county superintendents, supervise the enforcement of the attendance law and make such studies and reports as may be suggested by the State Council of Education. The same statute contains provisions designed to facilitate the merging of small school districts gradually, with the necessity of removing any incumbent local school directors.

California passed two acts to simplify the school district structure. One provides that whenever an elementary district, a high school district and a junior college district have coterminous boundaries, these districts shall be merged to form one unified district. The other establishes new tax limitations in five types of districts.

School Districts Are Revised

Another act expressly validated the formation and existence of existing school districts of every kind and class. This measure was necessary because many changes in districts had been made and in many instances the proceedings were marked by minor defects and irregularities which seriously impaired the financial operation of the districts by casting doubt upon the validity of any bonds they might issue to provide funds for buildings and equipment, the refunding of prior debts and other essential purposes.

California also authorized school boards to accumulate tax funds not required to be used for other than capital outlay, for a period not exceeding five years, for school building purposes. With the written approval of the local school board, the county superintendent and the state superintendent of public instruction, an affidavit setting forth the total amount to be thus accumulated in the district, may be filed with the county auditor by the chief of the division of schoolhouse planning in the state department of education. This affidavit then becomes an order to set up the cumulative building fund and transfer funds to it as specified.

New York enacted a statute relating to New York City only, making the board of education responsible in damages for injuries resulting from the negligence of any member, officer or employee of the board while acting in the discharge of his duties and within the scope of his employment, either within or without the school buildings. Another act of the same tenor applies to all boards of education in the state. Both acts authorize the boards to purchase and maintain appropriate insurance to protect against such liability, at their option.

Protects Farmer Minority

North Dakota stipulated that whenever a special school district includes six or more sections of land and an incorporated village, the whole having a population not exceeding 2,000, at least two of the five board members must reside on farms outside the corporate limits of the village. South Dakota fixed the compensation of independent district school board members at $1 per meeting with $15 a year as the maximum.

Ohio authorized local boards of education to compensate their members at not to exceed $2 per meeting for not more than ten meetings in a year. Districts receiving special aid from the state are not empowered to pay this item unless funds for it are derived from a levy in addition to the basic 3-mill levy. Members of county boards of education may be paid $3 per meeting for not more than twelve meetings, and 10 cents per mile for transportation expense incurred.

North Dakota authorized boards to pay district clerks not less than $10 for one school and $5 for each additional school, but not to exceed a total of $50 in any one year.

Dealing With Defacement

By ARTHUR C. SELKE

THE cause of property defacement may be placed under two classifications. Disfiguration may be either deliberate or less conscious. Intentional destruction is a type of maliciousness that is due to a vicious attitude on the part of the pupil. Much, perhaps most, of the injury to school property comes from less deliberate or even unconscious behavior.

The methods of dealing with malicious destruction need not be discussed. Such conduct must be dealt with like other types of premeditated misbehavior. Many textbooks have dealt with similar disciplinary problems fully.

How It Happens

Treatises on discipline have overlooked the less conscious types of defacement which probably account for by far the major amount of disfiguration. Such unintentional destruction is important, but the problem cannot be treated successfully without strong repressive measures.

The following are a few examples of subconscious sabotage. When in class pupils are supposed to be listening to the teacher or to the one reciting. While their efforts are exerted to catch the spoken word some pupils having pencils in their hands will have an urge to use them. If there is a groove on the desk top the pencil may be made to follow the groove and dig it deeper. If there is an ink blot on the desk they may trace around it. If a pupil sits in an armchair his pencil may follow the softer grain of the wood and make a groove. If there is a splinter he may pry it gently away from the rest of the chair. Numerous other examples could be suggested.

Probably the most objectionable disfigurement is in the vicinity of toilets, particularly men's toilets. The obscene drawings and literature are fortunately less common than formerly but the problem is still extant especially in the older type school buildings. While some of this is deliberate much is hardly conscious.

Pupils are not more considerate of their own property than that of others. Notebook covers may have so much designing upon them as to amount to positive mutilation. Printing or writing in a book owned by the pupil may receive much subsequent adorning. The disfiguration may make pencils and other school apparatus unsightly or even useless.

The fact that many mutilations are subconscious determines the preventive measures. Obviously, the pupil who draws or gouges on school furniture during class time cannot be treated as a malicious culprit. Since the act is without deliberation, the pupil is not easily convinced of the seriousness of his wrong doing. Usually he is only one of many wrongdoers and likely some previous acts of others gave him the suggestion.

Stern Measures Not Required

Even though strong repressive measures may deter defacement of school property other less drastic measures are fortunately more effective. The real reason for defacement of school property lies in the apperceptive background or "gestalt" inherent in the nature of human beings. The blot that the child sees on the desk top may almost fit the visual image of his mind. A little ornamentation may make it complete; hence the decoration. Active minds and dull classes make a splendid combination for school furniture defacement. If the suggestion for making classes more interesting was not already overworked by advisers from the sidelines, some suggestions might be made with regard to the proper motivation.

Temptationless Environment

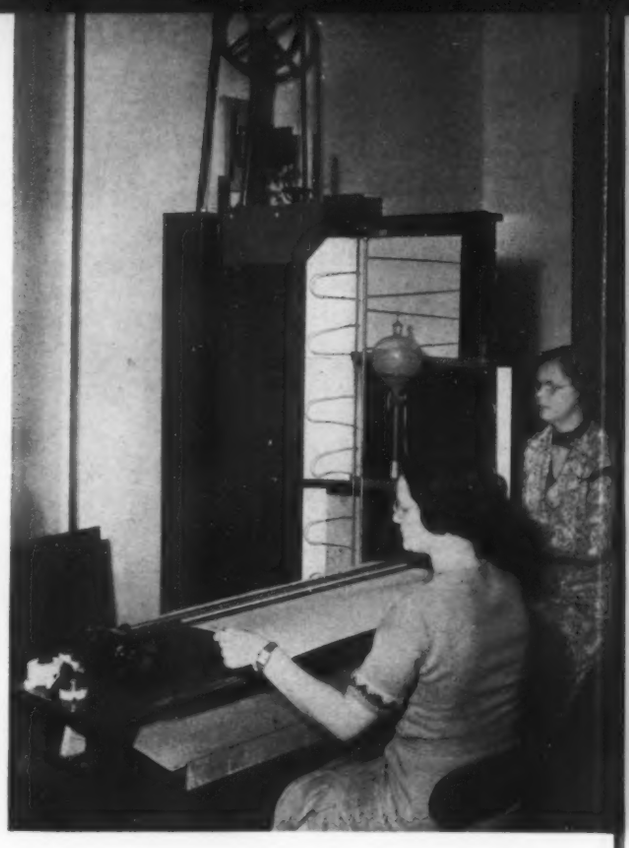
The problem is probably not a teaching problem at all. Something usually suggests the act of defacement, even the first one. A desk top of homogeneous material is likely to suggest little in the line of ornamentation to the pupil. If the furniture is hard the pencil may be too soft to deface it. School material should be washable or otherwise of such material that writing or other markings may be eradicated promptly. School furniture should be of light color so that any decoration may be detected easily.

In a few cases sanded surfaces may act as deterrents to use of penknife and similar activities. Various measures must be taken by the administrator to reduce the unintentional disfiguration of school property, but the best results will be obtained by placing the pupil in an environment that discourages or even fails to suggest mutilation of any kind.

Some dub it "doodling"; others call it "subconscious sabotage." We refer to disfigurement and mutilation of desks, books and toilets. This professor at a North Dakota teachers' college thinks much of it may be controlled by attention to material and design when selecting equipment

Devices for Testing

By JOHN L. STENQUIST



Blue printing machine methods in the handling of test results have made large scale testing programs practicable. For a period of two weeks each term while tests are being carried on, this machine continues to operate both night and day.

THE rock on which most testing programs have floundered is test drudgery. From the beginning everyone has wanted to use tests. The stumbling block always has been the time-consuming labor involved. In our experiments with large scale testing, it immediately became clear that means must be invented to reduce labor. Foremost and most formidable is the scoring load. Our first and persistent response to this has been to refuse to use tests that are not easily scored. It is now quite possible for nearly all tests to be valid, and yet be so arranged that scoring can be done with minimum labor.

Our greatest advance has been through the use of marking machines which we have developed from obsolescent mimeograph machines. Four machines now in our bureau have marked upward of 400,000 tests thus far. Practically all our locally made survey tests above primary grades are now designed to be machine marked. While these machines do not count and compute the final total score, our system reduces the labor for the teacher to less than one-third of that by the old method. Machine marking has been made possible by a series of refinements in the various steps involved, beginning with the test itself.

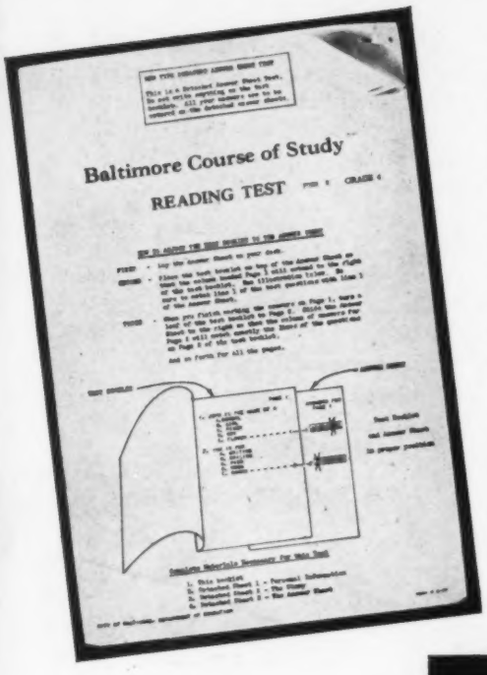
The practicability of our plan depends upon the use of a detached answer sheet adapted to typewriter and mimeograph techniques, upon which the pupil records all his answers for the various pages of a test booklet. This is in contrast to the customary method of writing the answers in the test booklet. We found it practicable to design and print both test booklets and answer sheets in such a manner that the answer sheet typographically fits each page of the test booklet. This is done by printing the test with suitable guide lines extending to the extreme right edge of each page (eliminating all white margin), and designing the answer sheet with corresponding guide lines to fit exactly the lines of each page of the test booklet. Since an answer sheet designed to fit a test booklet is to all intents and purposes merely a continuation of the test booklet page, the psychological objection to having a pupil write his answer on a detached answer sheet is overcome. This is one of the crucial steps in all machine-scoring schemes. Among high school and normal school students this fitting of the answer sheet to each test booklet page is probably not essential but desirable.

Having crossed the critical psychological bridge by getting the pupil's responses to a test booklet entered on a single answer sheet, a first and most important step in the problem has been solved. This method results in the pupil's unconsciously transferring to a single sheet all responses for every page of the test booklet. This reduces the labor of scoring at a single stroke, even though the answer sheet is scored by hand. With the detached answer sheets containing the pupils' answers in hand, the actual marking of each correct answer is done by a rebuilt mimeograph machine that imprints all the correct answers in a contrasting color, in proper register on each answer sheet in less than a second.

The marking machine must provide means to obtain proper speeds, adequate control, including accurate register, proper inking to produce clear copy and safeguards against spoilage. With our machines we found that after a few hours' practice, operators can mark, with sufficiently perfect precision and virtually no spoilage, at the rate of from twenty-eight to forty-five tests (answer sheets) per minute, that is, answer sheets for a class of forty-five pupils can be handled and marked in from one to two minutes. For long tests requiring two sittings, two answer sheets were used.

While by this method it remains for each teacher to count the total number of correct responses for each pupil after the answer sheets are returned from the marking machines, this task of counting is small in comparison with the old method of hand scoring, plus counting, each page of

Final Article of Series of Baltimore Program



Baltimore Course of Study

READING TEST

Above may be seen a typical test adapted to machine marking. Machine marking has been made possible by a series of refinements in the various processes involved.

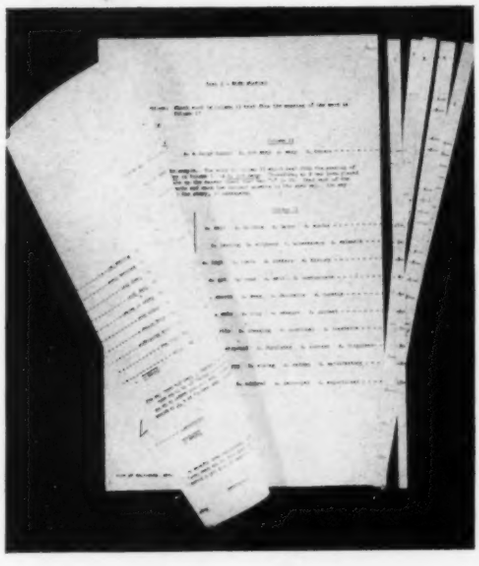
the test booklet. The total labor-saving effected is great and the accuracy of the marking itself is 100 per cent. The final accuracy of the score is dependent upon the accuracy of the teacher's counting, but this is also the case in the hand scoring method.

Thus we have a practicable method for the machine marking of tests that increases accuracy and reduces tremendously the labor of marking.

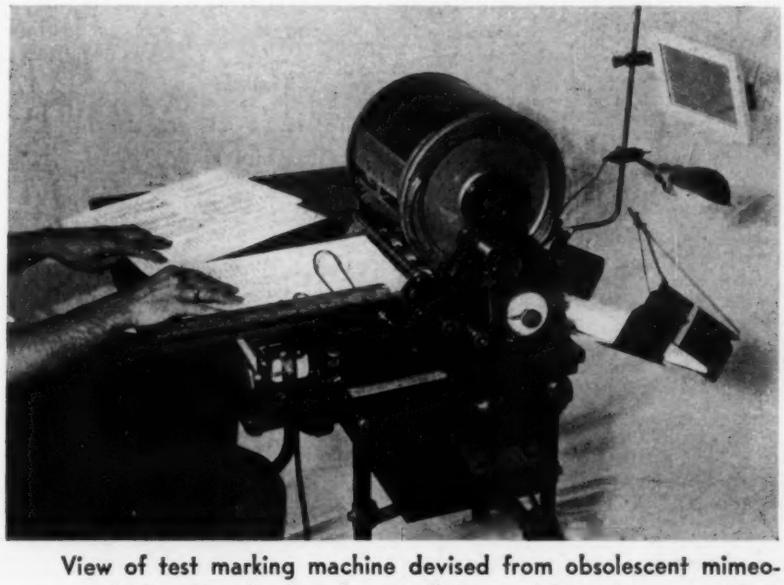
There are important and dramatic psychological factors involved. The value of a test is greatly increased if it can be scored immediately while the pupil's and teacher's interest is at its maximum. Machine scoring makes this possible. An example may be cited: In one of our largest high schools, an examination was given to about 2,500 pupils on a certain Thursday. The answer sheets were delivered to the bureau of research at 3 p.m. the same day, were marked in an hour and a half, and were returned to the teachers and pupils the following morning. This greatly increased the value of the test since teachers and pupils had the results while interest was at maximum intensity.

This kind of project is now being carried out regularly with many teachers in the high schools. In addition, our more skillful teachers are rapidly developing tests that can be machine scored. Our method has great flexibility. One important feature is that the answer sheets can be printed with a keyed code device so that these answer sheets and accompanying diagnosis of types of items may be distributed immediately to the class and used for concentrated instructional purposes. The keyed answer sheet marked by the machine becomes at once, without additional work on the part of the teacher, an individual pupil diagnostic chart for each question in a test. Pupil and teacher see at a glance not only which questions the pupils answer correctly, but also for each incorrect answer what type of error was made. This process facilitates diagnostic learning for it focuses the pupil's attention on correcting his specific weakness.

Similar techniques have been used by other experimentors and there is



Steps 1 and 2 of the technique for preparing matched answer sheets. Step 1 is shown at the right; Step 2, below.



View of test marking machine devised from obsolescent mimeograph. Precision feed and controlled speed have been provided.

no reason to doubt the practicability of the method. We have developed a considerable number of special techniques for the preparation of matched answer sheets, key stencils and various related items. The outstanding features of our particular method are flexibility, speed and low cost. As more perfect machines become available the potentialities of test-guided instruction will become great.

Summary Chart Tells All

The one device that more than all else "sold" our testing program to teachers, principals and all others concerned is a large printed summary chart especially designed to receive in systematic form all the data yielded by a testing program for a class. Charts of various types have been used by many other testers and there is nothing unique in the idea. But there is something important in it. Until we hit upon this rather obvious device, we made little progress with testing. The psychological effect of portraying the total results for a class in simple, semigraphical form is tremendous. It arouses interest instantly. Teacher, pupil, principal, superintendent, supervisor, parent and everyone else are interested. The accompanying illustration shows in small scale a facsimile of one of these 14 by 24-inch charts, used in this case to carry the results for six tests: intelligence, arithmetic, reading rate, reading comprehension, spelling and handwriting. In its use the teacher first enters the pupils' names in prenumbered spaces. Throughout the chart each pupil is represented by the identification number automatically assigned to him.

The major columns throughout the chart are assigned to the various tests. Each column is made up of the standard scores for each test, the proper scores being allocated to each grade level as indicated in the right margin. To enter a pupil's test results the teacher writes the pupil's identification number beside the score he received in each successive test, permanently indicating to which pupil each entry refers. The way the chart is designed immediately translates the pupil's scores into grade level equivalents. I.Q. scores are similarly translated into X Y Z ratings.

Whole Story of Class Is Told

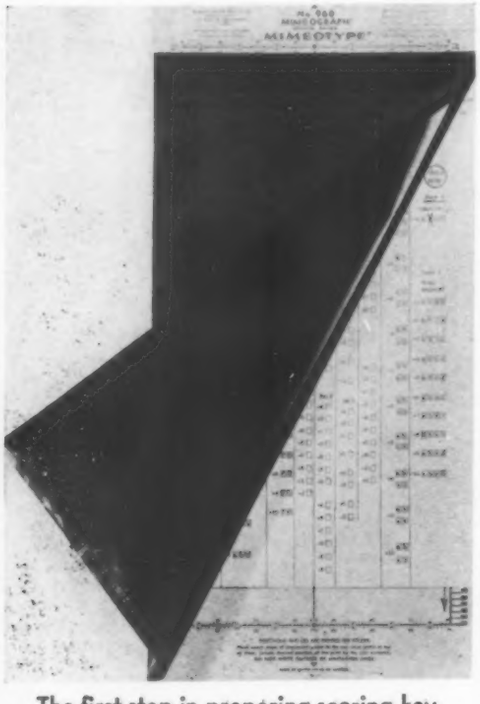
When all the entries have been made, what actually has happened is that the teacher has made a statistical distribution (although she may know nothing of statistics) of the results for each test and these are so arranged that they are immediately understood by anyone. The story of what any one child scored in each test, in comparison with all his comrades, and in terms of national norms is immediately revealed. The space between the two heavy horizontal lines through the center of the chart represents normal performance. Similarly the story for the class as a whole is revealed, with summaries at the foot of each column showing how many are at, above or below normal grade level.

Since the order in which the names are entered is according to the previous teacher's rating, a comparison of the teacher's estimate and what the test revealed is immediately available. This is always of great interest, whether there is agreement or disagreement. In this chart, for example, the teacher judged John Ford, the last name on the list, to be the poorest in the class. The chart shows, however, that his intelligence score was 100, far from the poorest, his arithmetic rating was only slightly below the normal level with many other pupils far inferior. Similarly, in reading rate and reading comprehension, while he ranks low, he is not the lowest in the class.

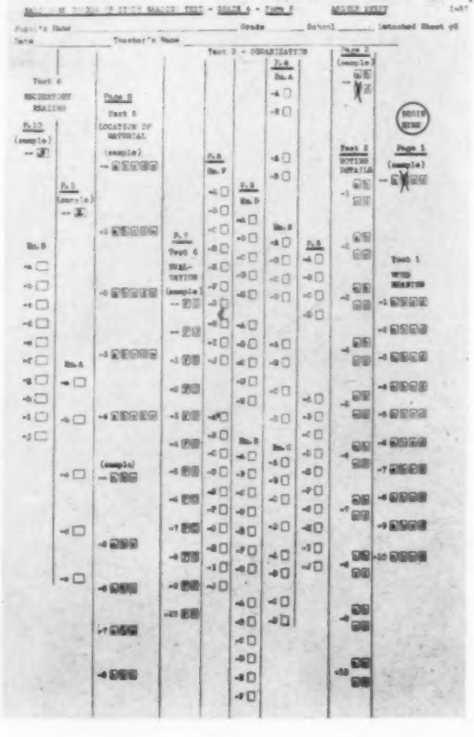
It seems absurdly simple. Yet audiences of teachers, parents or principals always respond to this form of record. Countless questions are stimulated by it. Various modifications of these charts are made from term to term. But each term's charts are carefully laid out to fit exactly the program in effect.

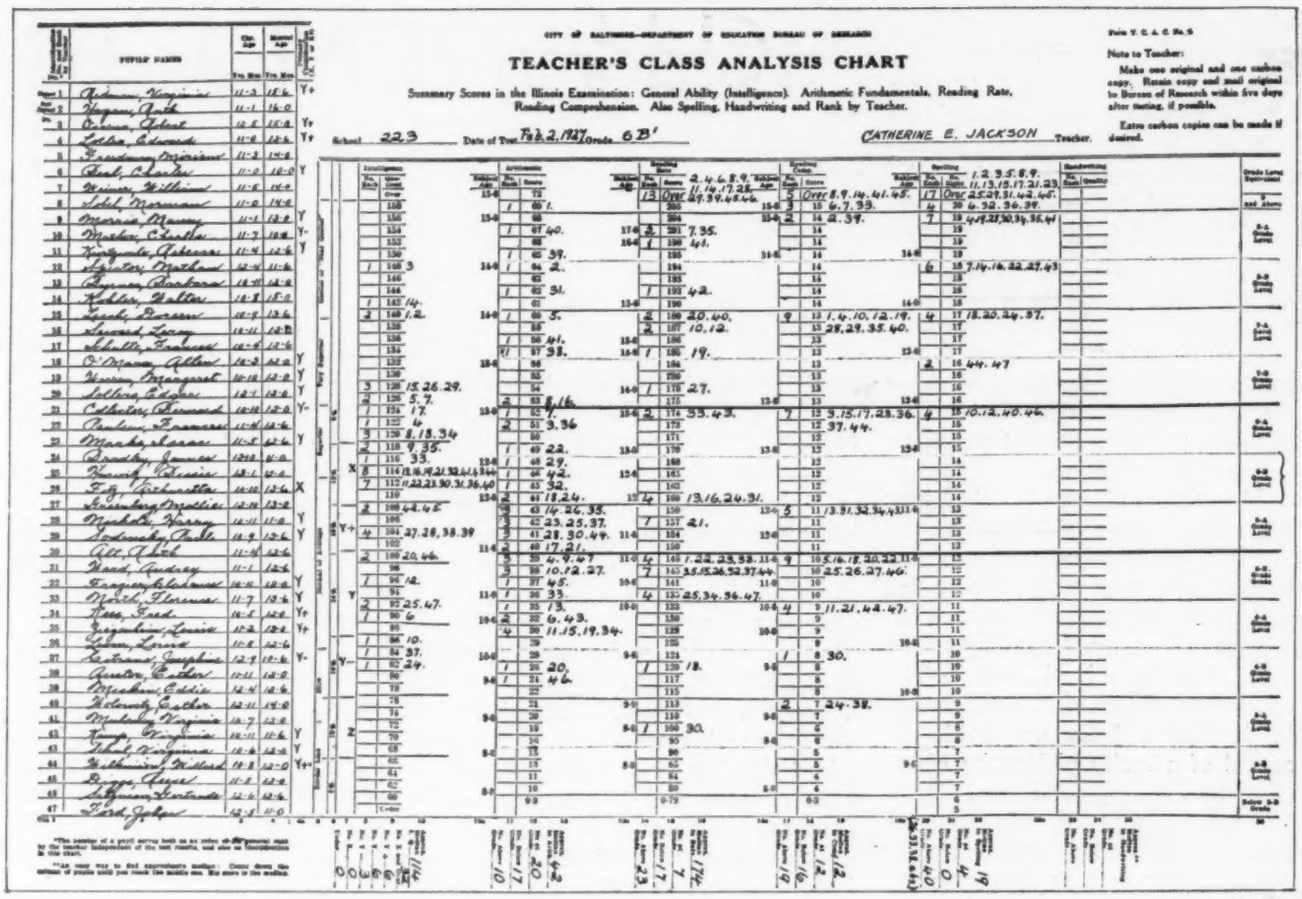
Election-Return Speed Necessary

An early problem was that of providing duplicates of test results. Carbon copies proved impracticable and distasteful. We solved this by printing these charts on transparent tracing paper stock, having the teachers use India ink, and installing a blue print machine at the bureau of research. Various attachments were built, adapting it to our purpose. Four fresh clean copies have been produced for every class; one each for the teacher, the principal, the supervisor and the superintendent, while the original tracings are filed at the bureau of research. For about two weeks each term, while the testing program is being carried on, this blue print machine is operated con-



The first step in preparing scoring key.





CITY OF BALTIMORE—DEPARTMENT OF EDUCATION BUREAU OF RESEARCH

TEACHER'S CLASS ANALYSIS CHART

Summary Scores in the Illinois Examination: General Ability (Intelligence). Arithmetic Fundamentals. Reading Rate, Reading Comprehension. Also Spelling, Handwriting and Rank by Teacher.

Form T. C. A. C. No. 5

Note to Teacher:

Make one original and one carbon copy. Retain copy and mail original to Bureau of Research within five days after testing, if possible.

Extra carbon copies can be made if desired.

School 223 Date of Test Feb. 2, 1927 Grade 6B' CATHERINE E. JACKSON Teacher.

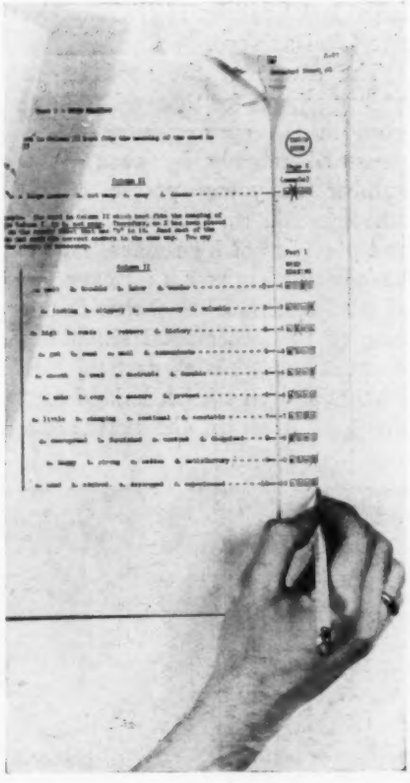
The one device that "sold" the testing program to teachers and principals is a large printed summary chart designed to receive all data yielded by a testing program for a class. Below is shown a special answer sheet.

tinuously, in many cases both night and day. Each school submits the original charts as soon as they are completed. Black and white duplicate prints are made and returned immediately.

The essence of this process is speed. These are like election returns. Their interest value and usefulness are quadrupled, if the results are available at once. Our analysis chart has proved dynamic. Armed with the information that it contains, supervisors, superintendents, principals and teachers all go into action.

A most important feature is that this system yields complete permanent record of the test results in full detail for every child tested without recopying a single figure. Literally millions of items of information are obtained from the single original entry by the teacher. Since these copies are all produced photographically there is absolute accuracy in copying. This is an example of converting technical into common labor, for blue print machine and messenger service are run by manual laborers.

As in every other office we have hit upon working devices that have proved useful Thus we have utilized what might be called the "overlapping margin technique" that saves much time. Many forms can be designed, as in the case of one form of our analysis charts, utilizing extreme margins for entries. This makes it possible merely by laying such filled-in forms out with margins overlapping rapidly to inspect or collect entries.



We have found that statistical distributions can be made with an ordinary typewriter. The addition of a few special characters on our typewriter machines makes practicable our answer sheet technique. Large type, clear computing tables are utilized wherever possible. Calculating devices of all types are used. Clear and clean typography in all tests and accessories is an item of importance that tends to make or break a program. All in all, there is in nearly every case some easy way, and the easiest way is frequently the best way.

Children of Neglect—

By A. V. OVERN

WHEN the early legislatures divided the states into school districts and authorized them to provide educational facilities for all the young people who were interested in them, the question of equality of school opportunities for all was thought settled. What a disappointment it is, then, to realize that now rural young people generally have much less opportunity to enjoy the stimulating experiences provided in secondary schools than those living in urban communities!

After they had vested control over education in those small districts, the legislatures pretty largely disregarded any further state responsibility for education. Further initiative, when it appeared, came from the people living in scattered local districts. The absence of educational statesmanship in legislative halls permitted the spread of a faulty philosophy which discounted the general need for a high school education. The fruits of that neglect, most apparent in rural areas, appear now as dangerous inequalities between rural and urban young people in the secondary school opportunities provided for them.

Dangerous Inequalities

Since most secondary schools are supported largely through the taxation of real property locally, their incomes depend upon the property values lying within the geographical limits of their respective school districts. As the latter differ greatly in enterprise, industrial development, natural resources, school population and size, the inequalities in the program of work they can offer their pupils tend to become more marked as the development and use of the natural resources in a few districts become greater and as the population in those places increases. When urban centers had achieved great density of population in proportion to the rural, the inequalities between them became so great as to endanger the ideal of universal democratic education. That is the crisis faced today in American secondary education.

North Dakota Makes Studies

During the depression years the property valuations in many areas declined, there were frequent tax delinquencies and various inconsistencies grew up between rural and urban school districts in the adequacy of their revenues and the efficiency of their expenditures. These inconsistencies sprang mostly from the bad features of an antiquated district organization for schools.

The time seems ripe for determining defensible type-organizations for maintaining secondary schools in rural areas, which may be adapted to individual localities after comprehensive local surveys.

The extent of the need for secondary schools for those who live and work in the open country may be measured roughly by counting the number of young people of high school age in those areas. The need and provision of high school facilities have been measured in almost a score of studies, completed or now in progress, of the educational situation in counties located in all parts of North Dakota and on the borderland across the Red River in the northwestern part of Minnesota. Some idea of the vast differences in the need for service and of the inequalities in size and resources of the districts that have been given the task of supporting rural secondary schools in this area may be obtained from studies.

In McLean County in the central part of the state, Sather reported a decreased enrollment of about 200 pupils from 1930 to 1934.* The enrollment in the nine districts that maintained high schools varied from 99 to 433 pupils. The consolidated-graded school districts enrolled from 51 to 163 pupils, and districts that maintained one-room schools enrolled from 15 to 83 pupils. Some of the latter had several one-room schools.

Busses Would Be Cheaper

E. C. Johnson reported a lack of economy in Burke County, in the northwestern part of North Dakota in a drought-stricken region, resulting from the fact that several one-room schools were maintained in each of several districts for very few children.* As many as five schools were maintained in the same small district. A large saving could have been made by transporting these pupils when necessary to one school building in each district. The seventh and eighth grades, which have come to be regarded as belonging properly to the secondary school, cannot possibly flourish and achieve their proper so-

*In an unpublished master's thesis, University of North Dakota Library.

Studies in a Rural State

cial objectives when there are not enough pupils enrolled in each school, as a whole, to create a natural social situation.

Hewitt in Traill County, in east-central North Dakota, found a negative relation between the number of children enrolled in school and the assessed valuation of property in districts that supported high schools. That meant that the inequalities constituted a penalty on those districts which supported secondary school standards.* That is quite a common finding in most of the small schools.

Dormitories a Possible Solution

Recently in Hettinger County, located in the slope country southwest of the Missouri River, Jacob Blickensderfer found almost 99 per cent of the 1,646 children between the ages of seven and thirteen in school,* and 92 per cent of the 409 young people from fourteen to fifteen years of age enrolled in school. There was a great increase in high school attendance from 1930 to 1933 in spite of the poor economic conditions in the county. Hence, there was no lack of need or demand for adequate secondary school service. In McKenzie County, also, in the west-central part of the state bordering Montana, with a population sparsely settled, the need is great; although there the physical features present such barriers to any future concentration of population that even transportation of pupils to consolidated schools seems prohibitive in cost.* Perhaps the only solution there is the use of high school dormitories, of whose practicability for this situation a recent study has been made.*

The need for more adequate service at the secondary school level is not confined to the sparsely settled regions of North Dakota. There is a real need for larger and more adequate secondary schools in counties with much denser populations than that found in McKenzie County. In Sargent County, on the South Dakota boundary line in eastern North Dakota, Flegal found that the appreciation by the people of what was offered in their schools was just as great in the rural districts with meager facilities as it was in the village high schools, when he measured it by the ratio of the average daily attendance to the enrollment.* He found further that the enrollment in the classified high schools was rather a high percentage of the total number of those of high school age residing in the districts conducting those schools, a fact not universally true in other counties. For in some areas the current secondary school offering needs popularization to meet the approval of all those of secondary school age.

"Not Interested in School"

A study made by G. F. Stewart of the reasons why pupils of high school age in certain rural school districts of Grand Forks County were not enrolled in the near-by high schools, discovered that 22.1 per cent reported as their reason for nonenrollment, "not interested in school."*

The causes for the unequal provision of secondary school services for rural and urban pupils in this region are complicated, as are also their possible remedies. They involve such things as: (1) differences in the bases of school income; (2) different degrees of debt necessary to provide the minimum acceptable secondary school plants; (3) different degrees of tax delinquency; (4) school boards of many different complexions, some of them paid out of school district funds, and (5) different current development of transportation possibilities. All operate to create vast differences in the ability of present districts to support secondary schools and to compel some parents to put forth a degree of effort in educating their children that represents a real sacrifice. That means that some districts must extend their collective efforts beyond their reasonable resources, or else go without proper secondary school facilities.

Intent of Constitution Nullified

In McLean County the taxable value of property per pupil ranged from less than $500 in one consolidated-graded school district to more than $9,500 in a common school district that maintained a one-room school. The property of railroads and utilities in North Dakota is taxed in the school districts in which it is located. That is unfair to the education of the children who live in other parts of the same county. Although the unequal provision of secondary school service may be overcome partly by more effective management within the present organization in

such matters, for example, as the cooperative purchase of the necessary standardized teaching supplies and equipment within an entire county,* yet an enduring equality between rural and urban pupils in this matter can be achieved only by basic changes in the organization for maintaining secondary schools. That is because the inequalities in assessed valuations of real and personal property, tax rates, state aid, apportionment and enrollment by districts cannot be erased by cooperation among districts to improve their management of internal affairs.

No Uniform Standards

A few of the dangerous inequalities in the opportunities of rural and urban children for secondary education in Polk County, Minnesota, as reported by Reishus were: (1) a difference in the program of work offered for the seventh and eighth grades in urban and one-room schools; (2) a difference in their participation in state aid, which favored urban pupils; (3) great inequalities in enrollment; (4) a noticeable difference in the success of these two types of school organization in preparing pupils for completion of the eighth grade; (5) a much lower cost per pupil of operating the schools in urban situations; (6) a greater popularity of secondary education in urban districts, judged by the extent to which pupils of high school age attended secondary schools from these rural and urban districts, and (7) a greater accessibility of secondary schools to the pupils in urban centers.*

Reishus found that industrial arts and music, which were a part of the daily program in the urban schools, were given no formal recognition in the seventh and eighth grades of the rural schools. The rural pupils, who were exposed to a more meager curriculum, outnumbered those attending the graded schools in the urban centers of the county. Pupils in villages had more opportunity to complete the eighth grade than those in the rural schools. Eighty-eight per cent of those enrolled in the eighth grade in the urban schools were graduated in 1933-34 while only 61 per cent of those who entered that grade in the rural schools completed it.

There was a less stimulating social situation in the rural schools because of the smaller average number of pupils attending them. Their teachers were more poorly trained than those teaching in the urban schools. Since most of the state aid went to the latter, the rural schools became progressively poorer by comparison. Only 7 per cent of the rural school teachers were men; while 26 per cent of those in urban schools were men. Average salaries of teachers in the former were considerably less than one-half as large as those in the latter. The average expenditure per pupil in the former was $45 as compared with $70 in the latter. The rural population contributed fewer than its proportionate share of those of high school age to the total high school enrollment in the county. All the facts found tended to indicate that the secondary grades in the rural schools were relatively ineffective and costly.

Unfairness in School Support

Certain generalizations based on all the surveys seem fair to make. Some pupils in the large area studied may attend in buildings inadequately equipped and manned. Some live where there are reasonable tax rates; others live where meager educational advantages are provided at the highest tax rates permitted by law. Some common school districts maintain as many as five one-room schools, with as few as four or five pupils enrolled in each; other districts maintain classified high schools with large enrollments, guidance programs, rich provision of materials and activities and attractive social programs. There is no uniformity in the educational programs of work provided for the children in rural and urban districts and even for those in urban districts of different wealth. There is no fairness in the school support provided, because it has produced (1) wide variations in the ability of districts to support schools; (2) uneven tax burdens; (3) unreasonable inequalities in the educational facilities provided, and (4) inadequate revenues even at best.

Uniformity in effort is lacking, because (1) the effort is controlled by too many different school board members with ill-formed ideas of the importance of education; (2) taxing the utilities and railroads in the districts in which they are located reduces the reasonable effort of the people in such districts to support their schools, and (3) the wealth of each county is by no means evenly used to support the entire educational program in the county. The same is true for the state.

The greatest problem of the secondary schools in the area studied results from the fact, emphasized again and again in every study made, that thousands of rural boys and girls have grossly unequal secondary school advantages compared with their more fortunate neighbors in the villages near by.

Correction of this inequality will depend largely on a shift of public sentiment toward the sanction of new and different ways of organizing school support and of centralizing school enrollment. Public sentiment must sanction the trial of new forms of organization on a controlled experimental basis. The solution of this problem will doubtless make necessary: (1) a facilitation of transportation; (2) an enlargement of small districts, and (3) a shift from local school support by small units to support by larger ones, with much more liberal state subsidies than have yet been achieved.

Reorganization of Districts Needed

These studies have gone far enough now to indicate that the whole state of North Dakota should be studied in all its various areas, disregarding county and township lines, with a view toward redistricting the schools. Density of population, transportation facilities and road conditions with probable improvements to be made in the near future should be used in establishing the most economical districts to conduct secondary schools for all. The data point toward the reasonableness of a state reorganization of school districts into centralized population areas, each of which will make possible the provision of a secondary school with an adequate program of studies to supply the curriculum needs of every person of high school age. This plan may solve the problem of educational inequalities.

*In an unpublished master's thesis, University of North Dakota Library.

Figuring Financial Ability

Of States to Support Public Schools

By LESLIE L. CHISHOLM

THE principles underlying an acceptable equalization program seem to be generally agreed upon, although the refinement of a technique for putting those principles into actual practice has lagged far behind.

Plans for the equalization of educational opportunity, either on behalf of a given state and its local school districts or the federal government and the states, have been based on the assumption that each local school district or each state, as the case may be, should devote to the support of its schools an amount equivalent to that which would be available by use of a constant tax rate for all districts levied on the tax resources or assessed value of property or, in the case of the federal government and the states, a constant portion or percentage of either potential or available resources.

Refinements in Technique Sought

Equalization plans based on such an assumption have in many instances gone a long way toward equalizing educational opportunity, and much good has come to education in many areas using equalization programs based on such a technique. However, a program of equalization formulated according to the foregoing procedure is very crude.

In an earlier study I had occasion to point out the possibility of a refinement in measures of ability to support public schools. It was pointed out that variations among the states in the per cent of total tax revenue allocated to education ranged from 20.44 to 43.40 per cent, with the average for the country as a whole equal to 31.27 per cent; that if the states were divided into four groups of twelve states according to rank in population per square mile the per cent of total revenue appropriated for education by these groups varied from 30.73 to 35.53 per cent.

The purpose of the present discussion is to present further research in this area. Attention will be devoted to a study of the per cent of total state and local tax revenue which would be reasonable to expect those areas to devote to the support of their schools, with special reference to principle involved and the technique for determining that percentage.

If it were reasonable to expect the states to allocate to education varying percentages of total state and local tax collections, it would be due to the equitable claims of other governmental services in the various states for tax revenue. One state being more urban than another would have greater need for certain governmental services and less need for other such services. Rhode Island may have a greater need for funds to support municipal governments than Nevada. The opposite may be true for certain other governmental services. The net result may be that when all states carry the same relative tax burden for the support of all state and local governmental services the public schools in the various states would have a just claim on different percentages of the total tax collections.

Should the states be expected to devote to education varying percentages of their total state and local tax revenue? If so, what per cent is reasonable for each state?

The procedure used to investigate the foregoing questions follows:

First, the states were listed according to the per cent of total state and local tax revenue allocated to the public schools under existing conditions. Since it was possible that any given year might find some state or group of states devoting an unusual percentage of revenue to the schools, the period from 1922 to 1932, inclusive, was selected for the study.

Second, in a series of columns opposite the states data and rank of the states were tabulated with respect to each factor believed to have some relation to the per cent of tax revenue devoted to education.

Third, rank correlations were calculated between the per cent of tax revenue devoted to education and other factors being studied. In this way those factors that go with the factor being investigated were selected for further study, namely, varying percentages of tax revenue devoted to education.

Fourth, the ranks of each state for all factors selected for further study in order to get a total or single score for each state on all factors were added.

Fifth, the states were ranked according to this single or combined score and grouped according to the ranking. After considerable study, it was decided that for purposes of the present investigation the states should be classified into six groups of eight states each, although evidence to be presented later indicates that there is no one set number of states that each group should contain.

Sixth, the median for each group was calculated and each state given the median value for its particular group. This median value represents the per cent of total state and local tax revenue reasonable to expect each state to devote to school support.

Factors Considered in Study

According to the foregoing procedure such factors as (1) population per square mile, (2) per cent of total population engaged in manufacturing and mining, (3) revenue receipts for education from permanent funds and the lease of school lands, and (4) ratio between units of educational load to be carried (roughly averaging

daily attendance), and (5) total population were accepted as the bases for determining groups of states believed to have similar needs for all governmental services, except education, as expressed by the per cent of total state and local tax revenue needed to support those governmental services.

This Much Was Assumed

Something should be said concerning the assumptions back of the foregoing procedure. The procedure accepts the verdict of democracy as the best answer to the practical problem, namely, what is an equitable percentage of total state and local tax revenue which education might reasonably expect after consideration has been given to the state's need for all governing services? The procedure infers that democracy's verdict to be of most value should be expressed (1) over a period of years, for example, from 1922 to 1932, inclusive, (2) under widely varying economic conditions, such as existed in the United States during the foregoing period of years, and (3) in large geographic areas, as represented by a group of eight American states.

The procedure also assumes that before an equitable percentage of total tax revenue can be determined for education, consideration must be given to the state's need for all governmental services. This is the area in which equalization plans for education have fallen short. They have assumed that it is equitable to levy upon the tax resources of school districts a tax at a uniform tax rate, although the total tax burden for all governmental services frequently has varied among districts operating under equalization programs.

Brief comment concerning the statistical aspects of the procedure used in this study seems appropriate. In step three the procedure correlations were calculated between various items as a means of selecting items for further study. The procedure does not assume causation between factors. Rather, it represents a search for parallelism of factors. The question of causation between factors or any assumption involved in this area was decided by reason and other analyses before selecting factors for further investigation.

The statistical findings of the present study are as follows. The eight states in group I may reasonably be expected to devote to education 36.49 per cent of their total state and local tax collections; group II, 33.61 per cent; group III, 32.24 per cent; group IV, 29.58 per cent; group V, 31.35 per cent, and group VI, 30.45 per cent.

The states which comprise the foregoing groups are:

Group I: North Dakota, South Dakota, New Mexico, Idaho, Wyoming, Nebraska, Montana and Texas.

Group II: Utah, Colorado, Kansas, Oklahoma, Nevada, Oregon, Minnesota and Washington.

Group III: Arizona, Iowa, Arkansas, Florida, Missouri, California, Mississippi and Indiana.

Group IV: Louisiana, Vermont, North Carolina, Tennessee, Alabama, Georgia, Wisconsin and South Carolina.

Group V: Virginia, Maine, Kentucky, Delaware, Illinois, Ohio, New Jersey and Michigan.

Group VI: New Hampshire, West Virginia, Connecticut, Maryland, Massachusetts, Pennsylvania, New York and Rhode Island.

It can be seen from the foregoing that the variation among groups of states is from less than 30 to more than 36 per cent, or a variation of more than 6 per cent. This variation becomes more apparent when viewed from another angle. That is, the degree of variation is one-fifth of 30, the per cent of tax revenue for education as calculated from certain states. Thus, if certain states should be expected to contribute 30 per cent of their total tax revenue for the support of education while others should contribute 36 per cent, the states of this first group would contribute then one-fifth, or 20 per cent, less tax revenue for the support of their schools than they would if all states contributed 36 per cent of their total tax revenue. This variation is indeed significant.

Furthermore, if such large geographic areas as the American states vary from 30 to 36 in the per cent of their total state and local tax revenue which education can justly claim, one cannot keep from wondering how great the variation in tax rate among such small geographic areas as local school districts might be if all districts would carry the same tax burden for the support of all governmental activities.

It will be observed that the three last groups of states vary only slightly from one another. In fact, each of these three groups varies less than 1 per cent from the average for the three groups. For practical purposes, therefore, the present study could have used four groups of states with only slight variations in results. The first three groups then would have consisted of eight states each. The fourth group would have contained twenty-four states.

The fact that the per cent of tax revenue that education could justly claim in the latter twenty-four states, when considered either as three groups of eight states each or one group of twenty-four states, was so nearly the same may be due to one of two conditions. First, basic factors other than those studied in the present investigation might have changed the findings at the foregoing point if they had been included. Second, there may be a point beyond which the various states have the same relative need for all governmental services (or nearly so), regardless of variations in basic conditions which reflect the need for such services.

Is This Principle Correct?

The foregoing findings are offered only as a tentative solution to the problem being investigated. Future study in this area will offer refinements to the findings.

According to the data presented, it seems just to expect certain states to devote to education annually an amount equal to 36.49 per cent of their total potential tax revenue. Other states which appropriate for education an amount equal to only 30 to 31 per cent of their total tax resources will find it necessary to carry the same tax burden for the support of all governmental services as do the foregoing states which devote 36.49 per cent of their total tax revenue to education. To expect all states to devote to education the same per cent of their potential tax resources regardless of need for other governmental services would be to expect certain states to carry a total tax burden considerably heavier than that carried by other states.

A Detroit high school teacher has attempted unsuccessfully to devise a prognostic test for typewriting. Her experiment has some value, however, in that it opens up certain avenues of approach for further study.

Prognosis in Typewriting

By FRANCES GARVEY

SEMESTER after semester young people come to commercial teachers to learn typewriting for vocational use. They all believe that they will succeed and will be able to earn their living at this work. Some of them go through the four courses of typing with flying colors; many of them are forced to drop out after two semesters without having learned anything of practical value; and too many of them fail at the end of the first semester.

A typewriting class is made up of some forty or more individuals, each with a set of abilities unlike any other individual in the class. As an illustration a boy in the Typewriting I class used for these tests finished twice as much work as any other "A" pupil in the same class; on the other hand, four pupils in this same class failed to learn the keyboard in one semester.

If we had a prognostic test which would not require more than forty-five minutes to administer, all pupils could be tested before enrolling them in typewriting. Those who were too slow for the vocational typewriting class could be offered a one-year course in typewriting for personal use and everyone could pass, giving all the pupils the satisfaction of succeeding.

The authors of a recent book "Typewriting Behavior"* say that it is impossible to make a prognosis of typing ability. Some of the experiments in this field, however, warrant the hope that eventually a useful test may be found.

Mary Lynch Gronert of Washington University has tried a substitution test that has a correlation with achievement of .48 which the St. Louis commercial teachers use.

Christine Frankfurth of Detroit, in 1933, made correlations of a key stroking test, a stroking test with pencil on lined paper, a handwriting test, a punctuation and capitalization test, a test designed to show pupils' ability to follow directions, and spelling tests. It is interesting to note that the spelling tests correlated with net speeds at .72. This fact seems to indicate that the test may be usable.

M. B. Stedman of Los Angeles made a study of the possibility of prognosis of school success in typewriting using the Thurstone employment test for clerical work, the Terman group test of mental ability, the MacQuarrie test of mechanical ability, a test on the fundamentals of arithmetic, a spelling test, Blackstone's proficiency tests in typewriting, and the reports of a physical examination made by school physicians. None of the resulting scores was found to correlate highly enough with typing to make it possible to tell a child whether or not he should take up typing as a vocation.

The need for a good test is evident. Hopeful of discovering a useful test for prognosis of typing ability, I sought the assistance of Dr. Walter

*Dvorak, A., Merrick, N. L., Dealey, W. L. and Ford, G. C. New York: American Book Company, 1936.

G. Bergman of the research department and started with the following procedure.

Experimentation was conducted with a single class of first semester typing pupils. Tests tried were of two kinds: one series of the paper and pencil type; the other, actual work on the typewriter.

The class in which these experiments were conducted was a beginning class in typing consisting of forty-four pupils. The range of intelligence of the class was about normal for a group of this type, running from a letter rating of D to A intelligence with the greatest concentration at the C level. Three pupils of the original group were repeating typewriting and so were not considered in the experiment.

Typewriters Not Used in First Tests

The first series of tests required paper and pencil only. Four paragraphs of selected material were duplicated. A copy of these paragraphs was given to each pupil at the beginning of the experimental period. The instructions for the first paragraph were to cross out all the letters as rapidly as possible. In the second paragraph, they were instructed to cross out only the e's; in the third paragraph, the o's and i's, and in the last paragraph, the s's, d's and capital letters. The time limit on all the tests was one minute.

In order to determine whether or not these tests had prognostic value, it was necessary to compare the work of pupils who were doing good work in typing with those who were doing poor work. Therefore, six weeks after the beginning of the semester, the scores of the pupils who were doing A and B work in typing were tabulated, as were the scores of the pupils doing D and E work. The scores in the upper group, on the cancellation test, ranged from 45 to 70; and the lower group, from 50 to 68. The mean for the upper group was 59, and for the lower group, 58. With the wide scattering of scores and the means almost numerically equal, it was evident that this and the other cancellation tests in this series were valueless for use as prognosis for typewriting skill.

The second series of tests, as mentioned above, was given on the typewriter. The pupils were taught just enough about the mechanics of the machine so that they could insert and release the paper, return the carriage, use the space bar and keep the hands on the home keys. Next, they were drilled on the three letters f, u and r.

The series started with a space bar stroking test. The object was to see how many spaces each pupil could stroke in one minute while keeping his hands on the home keys. In order to be able to measure this easily, they were allowed to strike a letter before they started and one after they were stopped. The results of this test and the next one, the stroking of one letter, met the same fate as the cancellation tests—the scores were scattered and the means of the groups which later did A and B work, and the means of the groups which later did D and E work were almost equal and so were discarded.

The next three tests, however, seemed to have possible value. The first was stroking one letter and following it by a space; the second was stroking two letters and following them by a space, and the third was stroking three letters and following them by a space.

Intelligence and Typing Success

Some six or seven weeks later, after the keyboard had been memorized, the pupils were given a one-minute test on a sentence containing all of the letters of the alphabet. The results of this test were used as a measure of their success in typing. It was assumed that if any of the tests that were tried before instruction had been given correlated highly with this sentence test, then they might have some prognostic value. A correlation was made, therefore, between this sentence test and each of the tests in this series. The correlation between the sentence achievement test and the one-letter-space was .10; between achievement and the two-letter-space, .23; and between achievement and the three-letter-space, .21.

In order to determine whether intelligence might be a factor in typing ability, and also whether the trial tests were measuring the same thing that is measured in an intelligence test, the intelligence ratings for these pupils were also correlated with the sentence test and with each of the separate trial tests. The correlation of intelligence with the sentence test was .23. This seemed to indicate that intelligence did not enter as an important factor in the measurement of typing ability as did the achievement test. If the achievement test was valid, then it follows that intelligence is not an important factor in typing success.

The correlation between intelligence and the one-letter-space test was .08; between intelligence and two-letter-space, .31; and between intelligence and three-letter-space, .41. These correlations are so low that it is clear that whatever was measured by them was not the same thing that is measured by an ordinary intelligence test.

Present Tests Inadequate

Although no single test furnished any useful prognosis of typewriting ability, it still seemed possible that by combining the various tests, a useful prognosis might be made. In order to test this assumption, a multiple correlation was computed. This correlation was a measure of the relationship that would exist between the best possible combination of the various tests used and the criterion, which in this case was the sentence test. The computing of the multiple correlation involved obtaining correlations between all the various tests and reducing them through successive steps to the final multiple correlation. In this case the correlation between the sentence test and the best possible combination of the other tests was found to be .30. This correlation is too small to indicate that the combination of the various tests would be very useful in predicting the ability measured by the sentence test. This may mean either that the various tests fail to make an adequate measure of typing ability or that the sentence test in itself is not an adequate measure of typing ability. The latter assumption may have some weight, but the bulk of the evidence points to the conclusion that these tests do not furnish an adequate basis for the prognosis of typing ability.

The value in the experiment probably lies in the fact that certain fields have been explored and certain avenues opened up for further experimentation.

Citizens of the Homeroom

The chairman of the homeroom citizenship committee, Ponca City (Okla.) Junior High School, describes an effective program of citizenship training.

By ALICE MOYER

AS a social guidance factor the homeroom is unsurpassed by any other phase of the educational program, for through this medium that type of individual and group guidance may be given which creates a firm basis for the spirit of the school and a natural habitat for the development of right social ideals.

The detailed organization of the homeroom or activity program held daily between 1:00 and 1:30 p.m. at the Ponca City Junior High School, Ponca City, Okla., augments the success of this guidance factor as a citizenship training agency. At present the 1,100 pupils constitute thirty-six homeroom groups of both boys and girls belonging to the same grade but possessing varied scholastic and other abilities, thereby enabling each group to be a fair competitor for the scholarship, athletic and other awards.

Each homeroom sponsor is a member of a general homeroom committee, which is directed by a supervisory committee composed of a representative from each of the three grades in the junior high school together with a general chairman. Frequent group meetings are held by grades and the needs of individual groups there revealed are weighed by the supervisory committee, which issues semimonthly bulletins outlining those themes requiring special attention, as well as giving references for readings found in the junior high, professional and public libraries.

To date the subjects thus emphasized are as follows: (1) purpose and importance of the homeroom period; (2) getting acquainted; (3) qualifications of officers; (4) election of officers; (5) training of officers and committeemen; (6) homeroom programs; (7) cooperation and loyalty; (8) observation of Armistice Day; (9) National Education Week; (10) accident prevention; (11) school award certificate; (12) the Christmas spirit; (13) thrift in the use of time and money (National Thrift Week), and (14) good sportsmanship.

These bulletins are sufficiently detailed to meet the needs of sponsors not especially well schooled in homeroom practices, though the minute method of handling each subject is left largely to the homeroom sponsors, the committee merely giving "suggested methods." Teacher and pupil initiative is therefore encouraged rather than restrained, and the resultant worth while and varied homeroom practices are disclosed in group meetings and readily adopted by other sponsors. A recent homeroom bulletin revealed twenty-two "homeroom helpful hints" embodying many new and interesting suggestions actually tried out in this junior high school.

All Pupils Hold Office

Encouragement, participation and cooperation are the keynotes of success in all activities; *e.g.* in the election of officers the fact is stressed that although the office-holders should possess certain exemplary qualities, any pupil in the group may qualify. This confidence begets confidence, and practically all pupils hold some important office during the year. This situation is made possible by not allowing pupils to hold the same office more than once and by the reelection of officers each nine weeks.

In a recent year every pupil in the school was given the opportunity of listing the seven traits of character that he considered most worth while. The seven that received the highest number of votes from the entire student body are given below, together with the month during which the homeroom vice presidents (program chairmen) decided it would be the most appropriate time to emphasize them especially:

1. Sportsmanship ... November
2. Friendliness ..... December
3. Courtesy ..... January
4. Honesty ..... February
5. Courage ..... March
6. Loyalty ..... April
7. Neatness ..... May

Plans were also made by the program chairmen whereby the topics chosen were kept before the homerooms by means of reports, dramatizations, posters and the like.

"Best Citizen" Chosen Annually

At the present time each homeroom is becoming much interested in a school award certificate contest sponsored by the Americanism committee of the local American Legion post. This certificate is to be awarded in each homeroom to the boy or girl who, in the opinion of his or her schoolmates and teacher, most nearly meets the high qualities of honor, courage, scholarship, companionship, leadership and service.

The method of choosing this annual "best citizen" is left entirely to the individual homeroom groups. The qualities are being carefully considered and an improved attitude is being shown as temporary best citizens are weekly or monthly chosen by the pupils themselves. The final awards will be made in a spring assembly.

The pupils have entire charge of the assembly programs that are held each week, thereby giving practically all pupils the opportunity of appearing on at least one program during the year. They are usually given by homeroom groups, wisely supplement other school activities and are worth while as judged by the increasingly large number of parents who attend.

The homeroom period on the first Monday during each nine weeks' period is devoted to a discussion of scholarship, since at this time report cards are given out. During the next regular assembly period the homeroom receiving the highest scholarship rating is presented a Scholarship Cup, and the group making the greatest improvement in scholarship is given a Scholarship Improvement Cup. These awards are held by the winners during the following nine weeks' period, or longer, should the same group again receive the highest ratings.

Presentations are made by the principal to the presidents of the groups and the student body views the ceremony with an unusual degree of seriousness. As a result the general scholarship is considerably raised.

How Community Is Served

The degree of cooperation necessary for the winning of these cups is evidenced by after-school study groups suggested and conducted by the pupils themselves.

Individual and group service to the community is exemplified in many activities during the year.

In the fall the entire school responds to the community chest drive. At Christmas time many huge stockings and baskets are filled with canned goods, candy, nuts and fruits for the Salvation Army's use, as well as for charity headquarters.

Current magazines, collected and used by the pupils during the year, are given to an Indian mission school, to the American Legion Home School and to children whose homes do not provide ample reading material as revealed by the sponsors' home visits. Books previously read by the donors have also been given to classmates.

Noon lunches have been shared with needy pupils who were reluctant to accept the free lunches given to deserving pupils by the parent-teacher association.

A whole-hearted participation in sports, with the resultant fine spirit of cooperation and loyalty, is made possible through the medium of the homeroom, since here the required dollar is raised that permits all members to attend interschool games.

With the increased pupil responsibilities and their invaluable contributions to self-development, the following characteristics tend to become predominant in the Ponca City Junior High School.

1. A definite plan of action initiated and carried out by the student body as a whole.

2. The execution of homeroom privileges by the pupils themselves, with the sponsor forming the essential background.

3. A development of right social ideals through a self-realization of pupil obligation to the community.

A Policy for Adult Education

By WILLIAM HEARD KILPATRICK

ILLITERACY is an economic handicap not simply to the illiterates themselves, but also to our production system. From a mere production-of-goods point of view we must raise the educational level of large numbers of our people. The cost in dollars would be more than offset by the added net income to the country at large. The same thing is true of re-education in trade and vocation. We cannot afford to scrap workers because their particular skill has been outmoded by a new machine. We must reeducate them vocationally.

Most strategic of these possible human savings are the unemployed adolescents. Unless we can somehow take adequate care of their morale and see them safely settled in jobs and married, with homes of their own, this group becomes our chief source of criminals and derelicts—a price we cannot afford to pay.

Why Universal Adult Education?

Why do we need universal adult education? The answer is clear. There has come a new need for ever continued thinking in the world of human affairs. Life has become very different, with rapid changes in ways of producing, of living, of thinking. Tradition's sway has been broken.

This is not all. The depression has made people question our economic system as never before. With science growing in geometrical ratio there promises ever more rapid change. Modern man faces the continual demand to meet and solve new problems. It is a permanent demand that we dare not refuse.

Continually new problems mean continually new study. If democracy holds, all must study, not simply the so-called leaders, for all must understand if they are to cooperate intelligently. No fixed amount of schooling can suffice. All citizens must study, no matter what their previous learning. We must have nothing less than universal, ever continuing adult education.

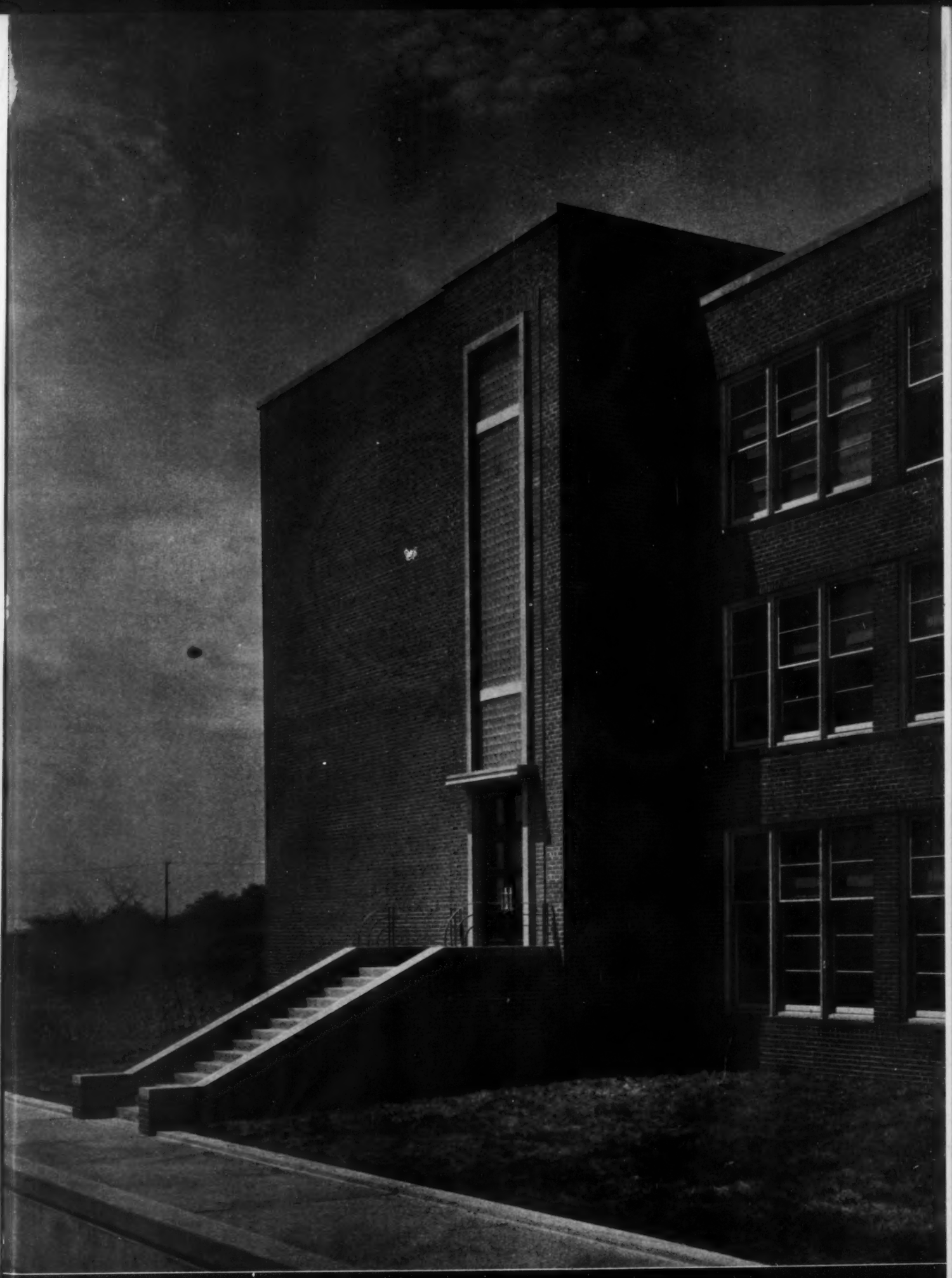
Who shall pay the bills for this universal study? The support must finally come from all the wealth of all the people. This means support by public tax money, local, state and national, in order to even up inequalities. That the main work be tax-supported and therefore publicly controlled does not deny freedom.

Local Control Is Best

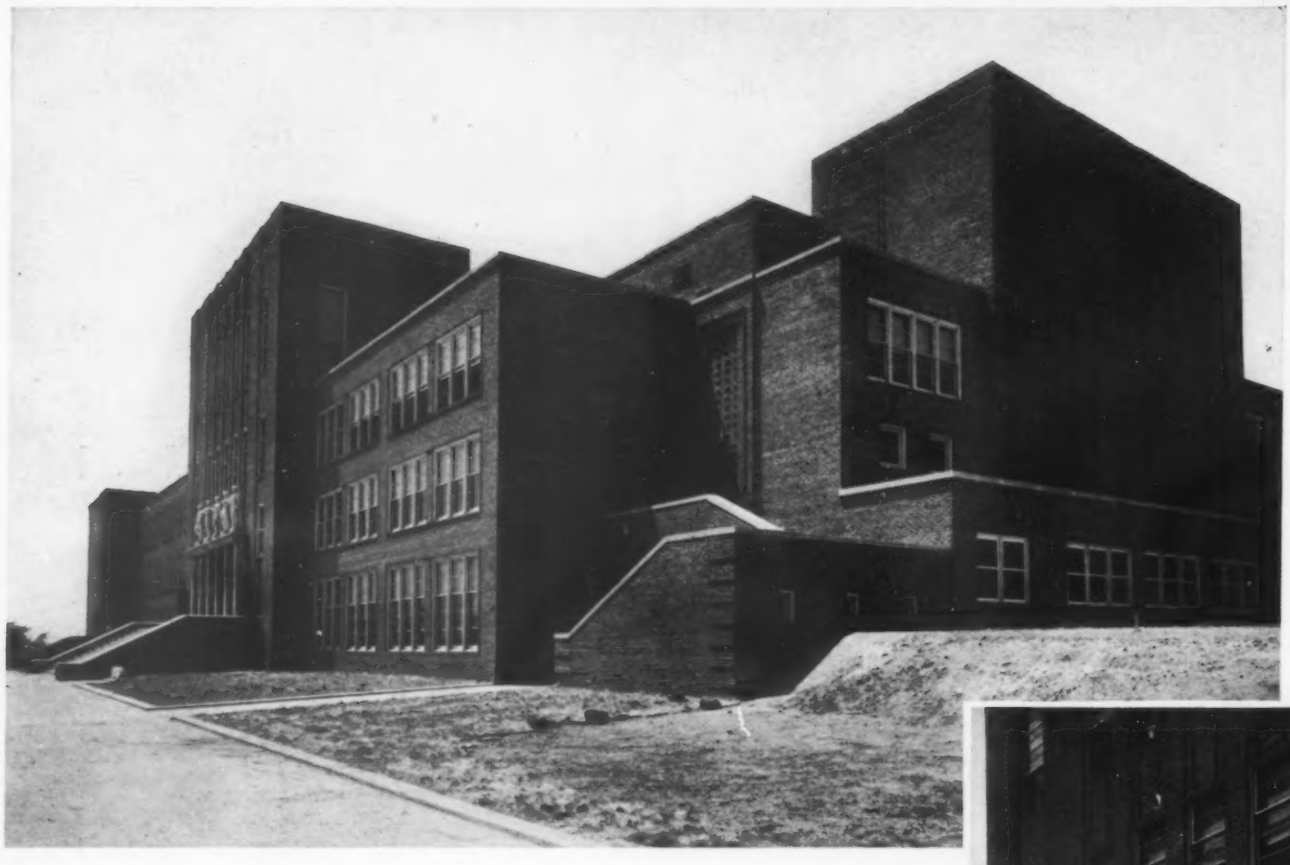
Each local group must control itself, with the possibility of getting advice and help on support upon reasonable conditions. There must be helpers and advisers provided at public expense, and these must be managed by some scheme of shared local, state and national control. Whatever we do we must get away as far as possible from the teacher-assignment, pupil-recitation notion of study. Grown people will never stand for it. It is bad for children, too.

Will the system be propagandist? Where the matter is controversial, no. Where there is reasonable agreement among the capable in the field, genuine effort will be made to spread better practices. Where the matter is still controversial, care will be taken to have all significant options studied.

In particular the system must afford in any public forum fair opportunity for the proponents of the unpopular side. This is the acid text of free speech and study. It is genuine study by the people that we seek.



THE SCHOOL PLANT



St. Louis Adds a "High"

By GEORGE W. SANGER

THE Southwest High School of St. Louis was completed and ready for occupancy in September. It is the most recent addition to the high school facilities of the city and is the first building constructed since 1923 for the use of white high school pupils. The name "Southwest High School" is a temporary designation derived from its location in the city.

The building is partly three stories and partly four stories in height and covers a ground area approximately 286 feet long and 170 feet wide. It is located on a site of 4.7 acres at the intersection of Kingshighway Boulevard and Arsenal Street, and is operated as an academic high school, the only one of this type in the city.

The planning of this building presented a many-sided problem. Some of the conditions that had to be faced were the following:

1. The limited funds available.
2. The restricted area of the site.
3. The necessity of avoiding as far as possible the noise and hazards of a busy traffic intersection.
4. The location of the site in a possible future commercial district which might force the removal of the school or a sale of a portion of the site.
5. The desirability of providing convenient access to the auditorium and of arranging for separate heating so that it might readily and economically serve community activities.
6. The possible widening of Arsenal Street, which would remove a strip of ground 20 or more feet wide along the north side of the site.
7. The necessity of providing for a possible future addition for shops.

Main entrance and (top of page) front and north elevations of newly erected Southwest High School, St. Louis.

Before proceeding with the details of how the foregoing obstacles were met, it may be of interest to outline the general approach to planning a high school building. There is one proper approach only and that is along functional lines.

Formerly a vast amount of plan-

ning was devoted to fitting the educational program into a building symmetrically planned about a center line, or into one the lines of which were fixed by some ancient principle of architecture or by a particular style or type of exterior architectural design. In our own city the architectural styles of a certain period have been so generally used for a long time that a building of any other type is doubtfully received as a school building. Our educational programs have been adapted to buildings of this style.

The more common-sense method, however, is to develop the best interior arrangement possible to provide the educational facilities required. In making plan studies for the interior, particular attention is paid to utility, flexibility and circulation. Utility implies the proper use of space; flexibility, multiple use of space, and circulation, the proper arrangement of the corridors and stairways and the convenient location of related units.

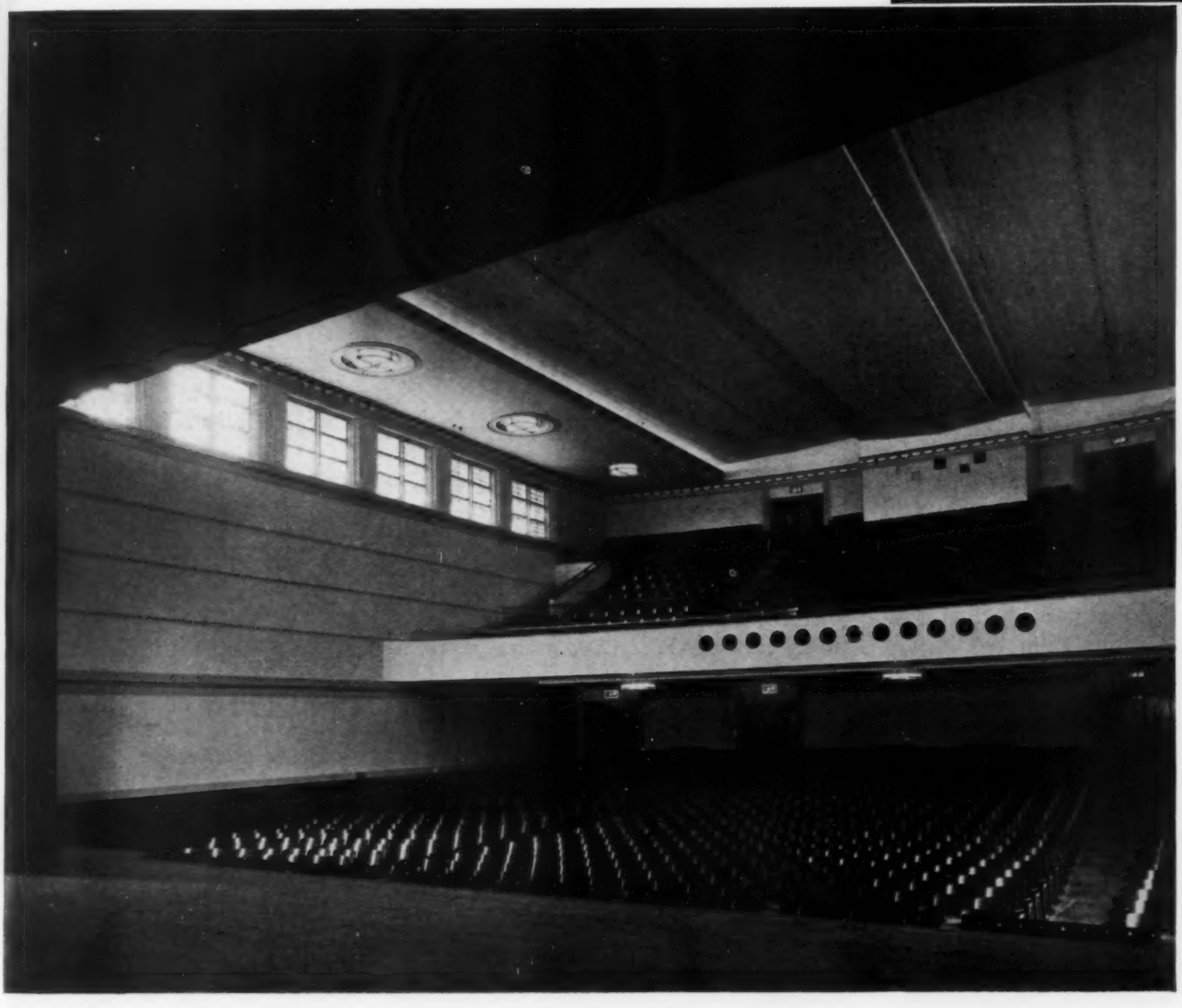
Having developed a functional plan the next step is to provide a simple, inexpensive exterior that develops honestly and naturally from the floor plans.

The walls of this high school are of red, sand struck brick in a variety of shades, moderately trimmed with cut stone. The general appearance is one of simplicity, the idea being that true beauty does not depend on decoration but on proper balance and proportion. Particular attention, therefore, was paid to the contour and silhouette of the building and to the arrangement and grouping of the fenestration.

To enhance the appearance, five heroic figures in sculptured stone have been placed over the five main entrance doorways. These figures are designed to express the educational activities within the building in the language of sculptural art.

The problem of limited funds was faced squarely. The plan was given intense study to the end that all

Southwest High boasts the most completely equipped auditorium of any high school in the city. Views of the auditorium, which seats 1,380, and of a stair hall are shown.



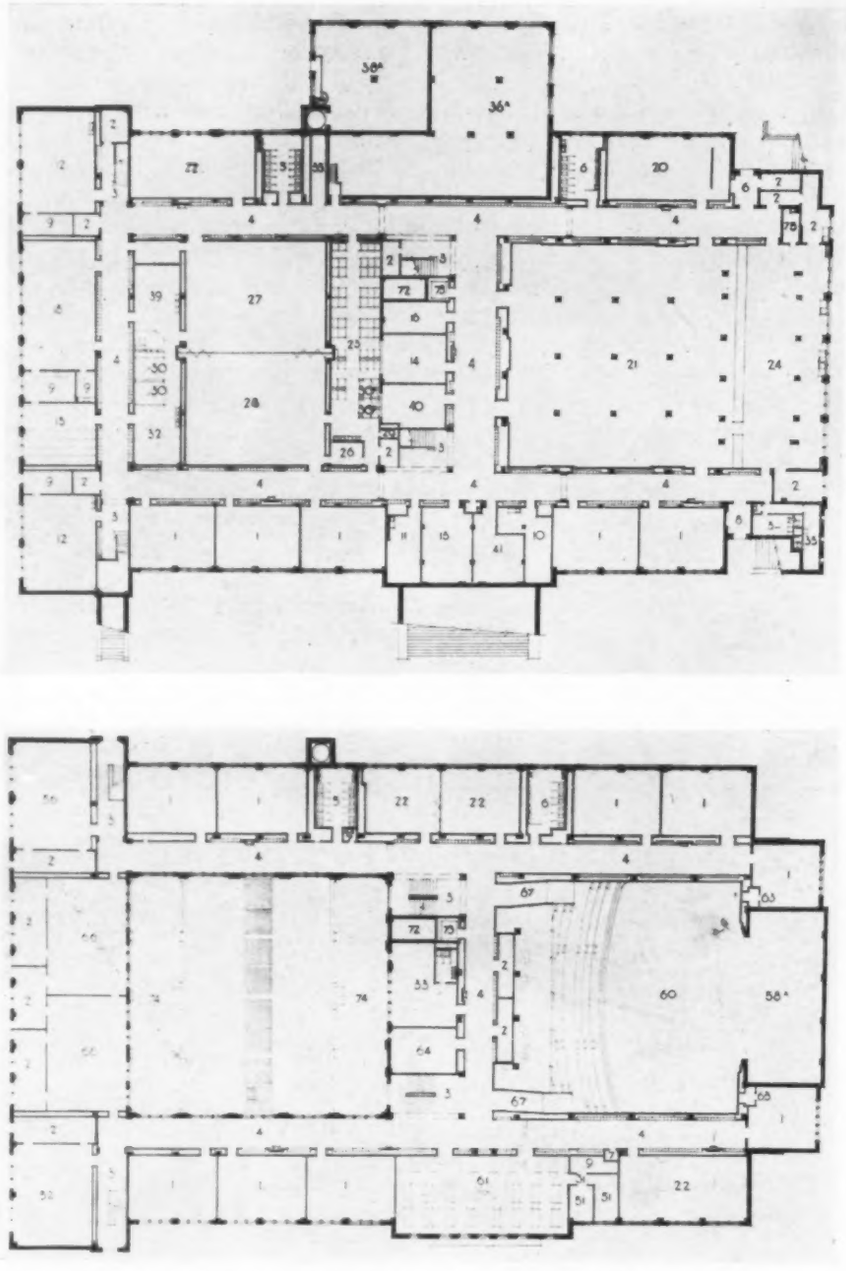
available space might be properly used. When the extra depth of laboratory rooms demanded greater height of windows to distribute light to the far side of the room, these rooms were grouped in one section of the building, making it possible to use greater story heights only when needed, retaining lower story heights in the remainder of the building. The ceilings of concrete were not plastered. Painting of walls and ceilings generally was done with one coat of washable, cold water paint.

The three obstacles next in order —the restricted area of the site, the necessity of eliminating noise and hazards of a busy traffic intersection, and the possible necessity of selling a portion of the site—were met as one by locating the building on the rear portion of the site or the portion farthest removed from Kingshighway Boulevard, the principal thoroughfare, with the playing field between the front of the building and the boulevard. By placing the rear elevation of the building exactly on the line of the street in the rear, which was a minor thoroughfare 30 feet wide, the maximum amount of ground was preserved for the playing field. Deliveries to the building could be made directly from the street.

This arrangement also removed the building as far as possible from the noise and hazards of the traffic intersection and placed it on the least valuable portion of the site if a sale of some of the ground for commercial purposes should become advisable. Fortunately, the rear portion of the site was the highest, and, according to information obtained from borings, less rock excavation was encountered at this point.

In working out the most economical plan the idea of a direct outside entrance to the auditorium for community use was abandoned, but convenient access was provided from the main entrances to the building. Provision was made for heating and ventilating the auditorium separately from the rest of the building.

The possibility of widening Arsenal Street and the provision for future shops were taken care of by holding the overall length of the building to a figure that left ground at either end for these purposes.

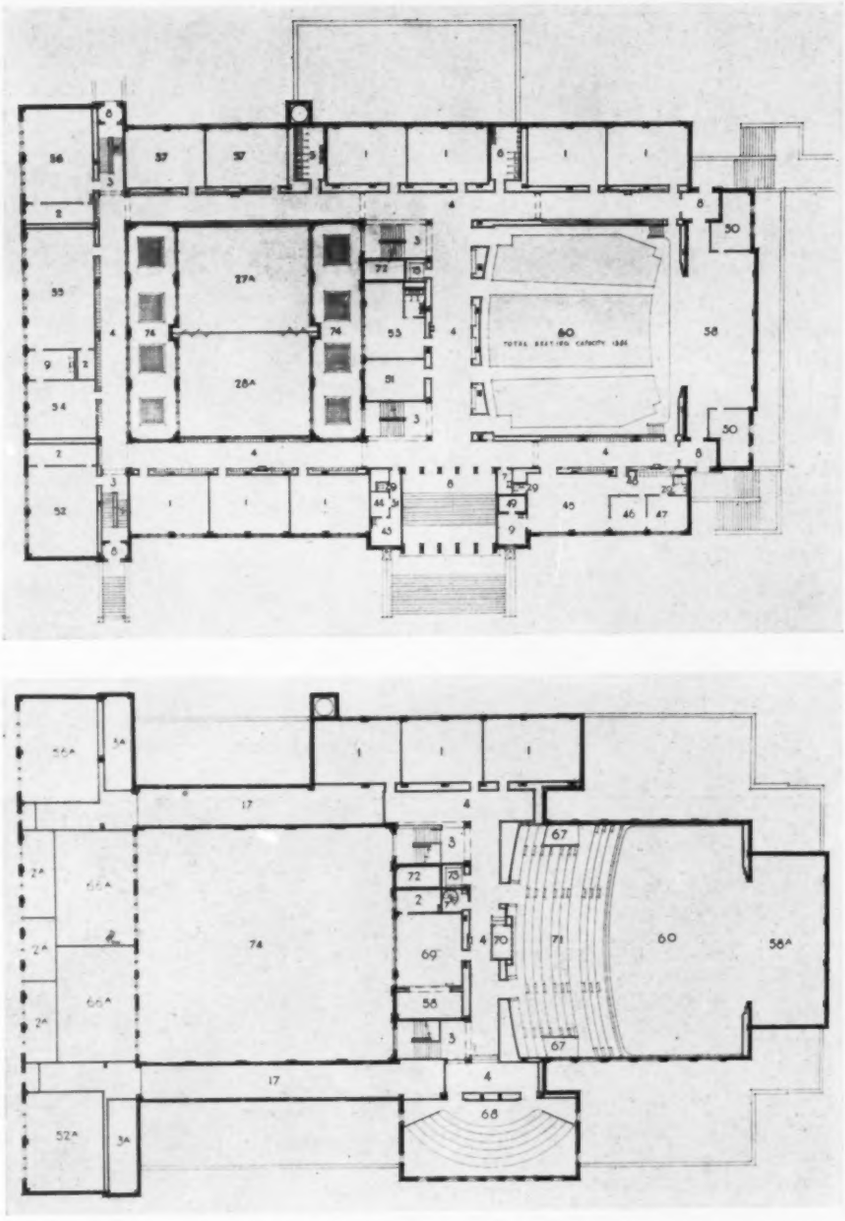


First and third floor plans. Room 21 in the first floor plan is the cafeteria.

The building contains 1,750 pupil places. There are 21 ordinary classrooms, 9 rooms for laboratories and lecture purposes, 3 study halls, 5 small classrooms, 2 business classrooms, 2 art classrooms, a band and dramatic room with a small stage, a music room, library, 2 gymnasiums which may be combined into one large unit, an auditorium seating 1,380 persons, a cafeteria lunchroom and a suite of administration offices.

The auditorium is embellished by the careful use of harmonizing paint colors and is the most completely equipped auditorium in the high schools of the city. In addition to the usual asbestos and draw curtains at the front of the stage there are two complete sets of cyclorama curtains, one for small stage settings and one for large settings. There are concealed footlights, spotlights in the front rail of the balcony, a complete stage switchboard for controlling the various lighting effects, and a stage scenery grid with spare scenery hangers.

Complete sound-on-film equipment has been provided for use either in the auditorium or in classrooms, a portable loud-speaker being used in



Plans of second and fourth floors. Room 60 is the auditorium. The unit cost per cubic foot of this building was 33.1 cents, and the unit cost per pupil place was $396. A total of 1,750 pupils are accommodated.

the latter case. A permanently installed sound amplifying system in the auditorium may be used with stage microphones or as a part of the general radio and public address system. Electrically operated darkening curtains on the windows may be operated either from the cinema booth or from the stage to darken the auditorium for motion pictures.

The entire building is equipped with a radio and public address system of the "talk back" type. That is, two-way communication is possible between the central station and any loud-speaker station. This system of communication is supplemented by an automatic telephone system with phones in the principal administrative departments and two phones for general use at convenient points on each floor. This provides means for private conversation when necessary. Loud-speakers are provided in all classrooms and other principal rooms throughout the building. Radio programs may be received or phonograph records played and broadcast to any room or rooms desired. Two amplifier channels are provided so that these two operations may be simultaneous.

A system of individual pupils' lockers has been built in the corridor walls with locker fronts flush with wall surfaces. They are equipped with one of the latest types of master-keyed combination locks.

Another interesting feature of the building is the cafeteria located on the ground floor under the auditorium, equipped to serve healthful, appetizing, low-cost meals to pupils and faculty. All baking, roasting and frying are done with electricity. The soup kettles, plate and food warmers and coffee urns use steam instead of electricity. The serving counter, shelving, dishwasher and dish tables are constructed of stainless steel. The kitchen equipment includes such motor-driven devices as mixers, grinders, potato peeler, bread and meat slicers and dishwasher. The cooking odors are exhausted through hoods and ceiling vents by means of a suitable motor-driven blower equipped with a fire by-pass.

The arrangement for serving the pupils is unique. The serving counter extends the full width of the cafeteria with coffee urns and ice cream dispensers at each end. The pupils form two lines at the center which move in opposite directions toward the ends of the counter and thence to the cafeteria tables. The tables have easily cleaned, indestructible, black composition tops.

Particular attention was given to the mechanical equipment. The problem of heating and ventilating was thoroughly studied in connection with the plan in order to provide adequate space for concealed air ducts and to make the duct runs as short as possible. The building is mechanically ventilated with automatic temperature control provided for each room. Tunnels large enough to walk through were constructed below the ground floor level to serve as plenum or pressure chambers. These tunnel plenums are equipped with manually operated dampers by means of which heating and ventilation may be supplied to any of three sections of the building independently of the others. One of these sections comprises the auditorium unit of the building, thus allowing the auditorium to be used for community purposes without incurring the expense of heating the entire

building. This system of dampers also affords the means for maintaining unequal pressures in the different sections which may be used to overcome excessive exterior wind pressure conditions.

Each individual room is equipped with a compensating thermostat instead of the usual dry bulb thermometer type. The purpose of this type of thermostat is to maintain an effective temperature, that is, a comfortable temperature based on both heat and humidity conditions.

The usual equipment of fans, air washers and air filters has been provided. Automatic humidity controls, located at five key points in the building, operate the air washer valves. Auxiliary fans on the exhaust side of the auditorium are so arranged that they can be used to boost the recirculation or to discharge the air directly to atmosphere. Instead of the usual arrangement of hot and tempered air plenums, provided with mixing dampers to control the temperature of the air delivered to each room, the air in the plenum is carried at one temperature, automatically controlled to suit outside weather conditions. A low resistance booster coil is placed ahead of the outlet from the plenum chamber to each room, and this coil is operated by the thermostat in the room to control the temperature of the incoming air.

Twenty-two cubic feet of washed, filtered and heated air per minute per person was used as a basis for computing air deliveries except in the gymnasiums where 32 cubic feet per minute per person was used. For the purpose of quickly raising the temperature to the required level for opening school in the morning, 75 per cent of the air may be recirculated.

The heating equipment consists of two 250-horsepower, high pressure boilers equipped with forced draft, chain grate stokers designed to burn the bituminous coal available in this district. High pressure boilers were installed and space is provided in the apparatus room for the installation of engine and generator units so that electric power may be gen-

A well lighted music room (top of page) is provided. Built-in individual lockers are equipped with master-keyed combination locks.

A corner of one of the two art rooms on the third floor showing the happy use of sky lighting in addition to regular window lighting.

erated in the building if it is later found to be advantageous.

The electric system includes the usual lighting arrangements, a complete clock and bell system and the automatic telephone and radio and public address systems previously mentioned. Classroom lighting fixtures are of the round, shadowless, opal glass type suspended on swiveled pendants. Four 300-watt lights are provided for a standard classroom, furnishing about eight foot candles at desk height. The two lights on the window side of the room and the two on the side opposite the window are controlled by separate switches in order that they may be operated independently.

The principal lighting of the auditorium is of the indirect, concealed type. It is supplemented, however, by special fixtures of modernistic design. Special fixtures of similar design are used at other points of interest about the building.

Another item of prime importance is that of sanitation. Here again, as in the selection of all other mechanical equipment, consideration was given to balancing first cost against future maintenance and efficient operation. The vent and waste system and the hot and cold water lines all are of galvanized wrought iron pipe. All toilet bowls, urinals and drinking fountains are of vitreous china and are of the wall-hung type. Toilet bowls are flushed by seat operated flush valves, and urinals are equipped with automatic flushers. The toilet rooms are conveniently located on the first three floors and are arranged in stacks to conserve piping.

Each toilet room is equipped with lavatories and liquid soap and paper towel dispensers. Separate ventilation is provided for toilet rooms by means of an exhaust fan of ample capacity located in the attic and discharging directly to atmosphere. Shower baths are of the gang type for the boys and of the individual type for the girls. Individual dressing booths adjoin the girls' showers. Acidproof stoneware was used for sinks and connections in the chemistry laboratory.

In addition to the foregoing, the mechanical equipment includes a six-sweeper vacuum cleaning system with outlets so arranged that the maximum length of hose connections does not exceed 75 feet.

The contract price for the building complete, excluding furniture and educational equipment, was $692,935. The cubage was 2,090,800 feet and the number of pupil places, 1,750. The unit cost per cubic foot was 33.1 cents and the unit cost per pupil place, $396.

Let Us Have Music

By L. C. MOHR

Interest in music at South Haven, Mich., has increased greatly since the high school has a new building with one entire floor devoted to practice rooms and auditorium.

MUSIC for many years was considered an extracurricular subject and teachers used any classroom, gymnasium or auditorium that was available. In many cases they shifted from classroom to classroom as the academic teachers had vacant hours. Instruments were stored in the principal's office, corridors or cloakrooms and often disappeared.

Now in most schools music has established itself as a regular subject but the facilities for instruction have not been greatly improved. It is still an orphan as far as proper classrooms are concerned.

In South Haven, Mich., in 1936, it became necessary and possible through a PWA grant and through local contributions to build a vocational building to house agriculture, woodshop and metal shop. It was thought advisable to place all of these classes on the ground floor, and a one-story building was considered. After some discussion, it was decided to construct a two-story building and to move all music activities to the second floor of the vocational building. This was possible as this building is on the same plat of ground as are the senior high school building and a large grade and junior high building.

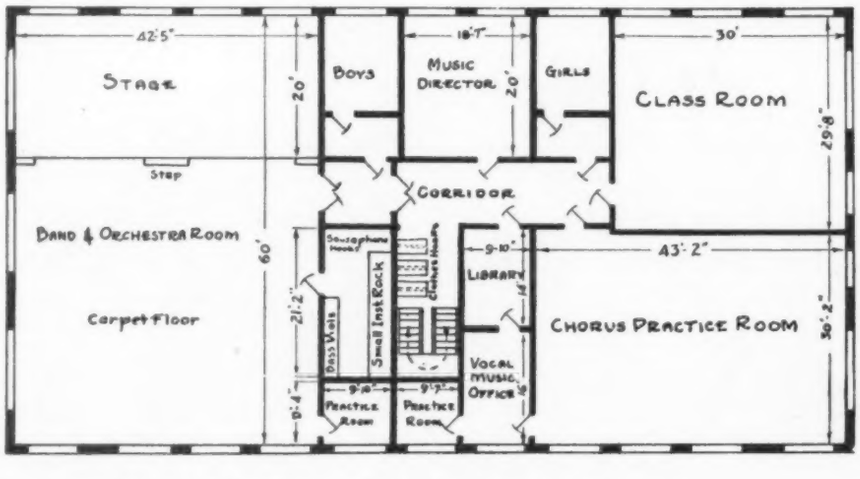
South Haven is a small city of about 5,000 with a school population of about 1,350, drawing many high school pupils from rural areas around it. It has two full-time teachers of music, one teaching instrumental music exclusively and one vocal music. Part-time teachers give class lessons in piano. There are about sixty pupils in band and the same number in orchestra; some 110 pupils sing in the girls' glee club of the senior high and eighty in the junior high group. The boys' glee clubs contain smaller numbers. The mixed chorus groups are much larger, containing around 140 pupils. Class lessons on all band and orchestra instruments are given free of charge and many of the instruments are furnished to the children. Interest in music is great in both the school and in the community.

The music department was assigned the entire second floor of the vocational building, and the accompanying drawing shows the layout worked out by the music directors.

The band and orchestra room has a floor space of 42.4 feet by 62 feet in the west end of the building, with a raised platform 20 feet deep at one end. This platform is raised about one foot above the level of the room and has a maple floor. To enable the director to space his musicians properly for a concert, without going to the auditorium for a rehearsal, the outlines of the large auditorium stage are painted in heavy black lines on this platform. These outlines are equivalent to the space within the curtains on the auditorium stage to which the band or orchestra is restricted.

The main floor of the room is covered with ¾-inch padding and a fine carpet. Windows have drapes that can be drawn to shut out direct sunlight. The heavy carpet and curtains take care of the acoustics in excellent manner. Folding steel chairs are used for seating an audience, and a small number are placed there permanently. When a large audience is expected other chairs are brought in from the glee club room.

The band and orchestra room is used for rehearsals of both organizations, for rehearsals of small groups



Layout of the floor as worked out by the music directors.

of various kinds and for public performances of small groups and individuals. It is also used for small community meetings, faculty meetings and for displaying school work. It will seat 250 persons.

Adjoining the band room is an instrument storage room with racks or cases for 120 instruments. Each pupil is assigned a special rack. Also adjoining the band room is a small practice room, 9 feet by 10 feet, in which pupils may practice during free periods or after school. Thus those with large instruments do not have to carry them home for practice.

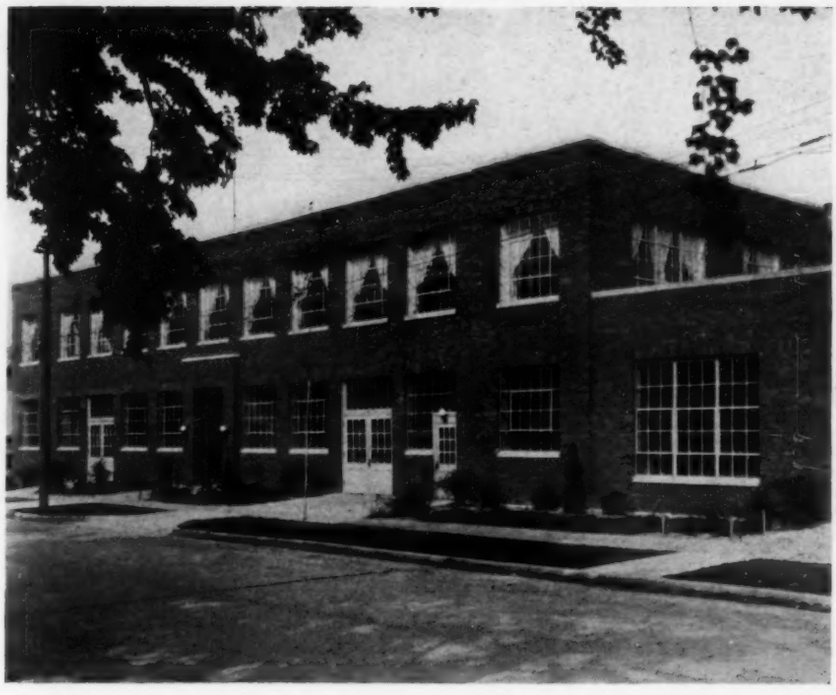
The director of instrumental music has an office, 18 feet by 20 feet, which is equipped with cupboard space on two sides for filing music and books. It also has a full length mirror, filing cases and piano. This room is used for instrumental class lessons and as the headquarters for all instrumental work.

The vocal music groups have a large room, 30 feet by 43 feet, for a glee club room. This room has drapes at the windows and bulletin boards for display purposes. Here, also, a stage is outlined with black paint in the same size as the auditorium stage. This enables the director to "set the stage" for operetta and festival performances without using the main auditorium. This room will hold about 200 folding chairs.

Adjoining the glee club room is an office for the vocal director furnished with book shelves and bulletin boards. This room has no teaching equipment. Back of the office is another practice room for small vocal groups or solo work. The practice room is also used by the instrumental groups.

The vocal department also has a library with closed shelves adjacent to the glee club room for all music used by the various organizations. It contains a reading table and is used for study purposes by those who major in music. It provides for a large expansion in vocal work.

In addition to the rooms described, there is a general classroom in which harmony and piano class lessons are taught. One piano and several "dummy" pianos, which were made by a local piano factory, are in this room. The "dummy" pianos have the regulation keyboard and action but



The vocational and music building (top of page), the curtained second floor being the music section. Below, band and orchestra room in use.

are noiseless and are mounted on stands built for that purpose. This room also is used for small group rehearsals when the other rooms are in use. It has both bulletin boards and blackboards and can serve as a regular classroom for academic subjects.

The band and orchestra room is soundproofed and is separated from the other rooms by double partitions and from the corridors by double doors. Walls are of gypsum tile and plaster.

Another unusual feature of this building is a large boy scout room in the basement. This building was placed on the edge of a ravine, making possible a 15-foot basement under the entire building with a minimum of excavation; the basement has daylight on two sides. Part of it is used for storage, but the greater portion is used by the scouts. They have a large playroom, 62 feet by 75 feet, part of which is marked off as a basket ball court. Adjacent to this room are five locker rooms, 10 feet by 10 feet, for scout troops.

Newburyport High School is so oriented that sunshine enters all classrooms save three.

It Turns to the Light

By CHARLES R. THIBADEAU

THE Newburyport High School, a PWA project, is a modified U-shaped building with the front and short axis facing due north and the auditorium and gymnasium wings adjacent to the front. The building, with accommodations for 1,000 to 1,200 pupils, is located on a 12-acre tract of land in the geographical center of Newburyport, Mass., and on its most beautiful residential street.

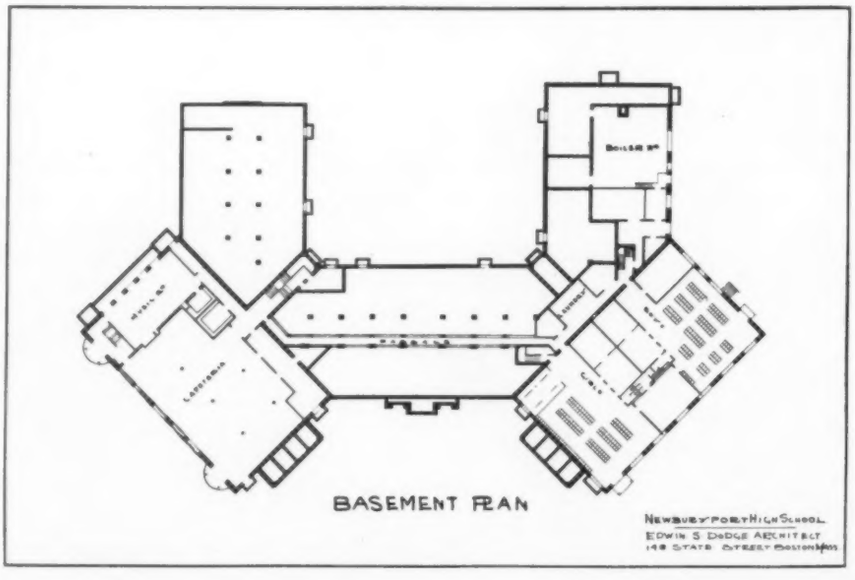
The orientation makes it possible to have all classrooms with east, west or south lighting with the exception of two art rooms and a general science room, which, together with the library and the offices, are located in the front of the main building facing north.

Total cost including land, building, architects' fees and equipment ran about $561,780. This amount is allocated as follows: land purchase, $25,000; building contract, $473,780; architects' fees, approximately $30,000, and equipment costs, approximately $33,000.

Athletic fields are in the process of development under WPA projects. Amounts appropriated by the city for WPA projects on stone wall and athletic field grading approximate $6,400. Additional appropriations that the city probably will be called upon to make if contemplated WPA projects should be carried through will approximate close to $7,500.

The school is a semifireproof structure. In general, it is a wall-bearing type except that the corridors are carried by structural steel. The floors are grid flat slab, the basic principle of which is the reduction of dead load by creating voids or domes, thus dispensing with concrete which has no structural function.

The total contents of the building is 1,403,000 cubic feet; it was erected at a cost of 33.8 cents per cubic foot, exclusive of architects' fees and equipment, but including heating, ventilating, lighting, plumbing, built-in cabinet work, all lockers wherever located, shelving in workrooms and closets, clocks, bells, inside telephone systems between offices and service

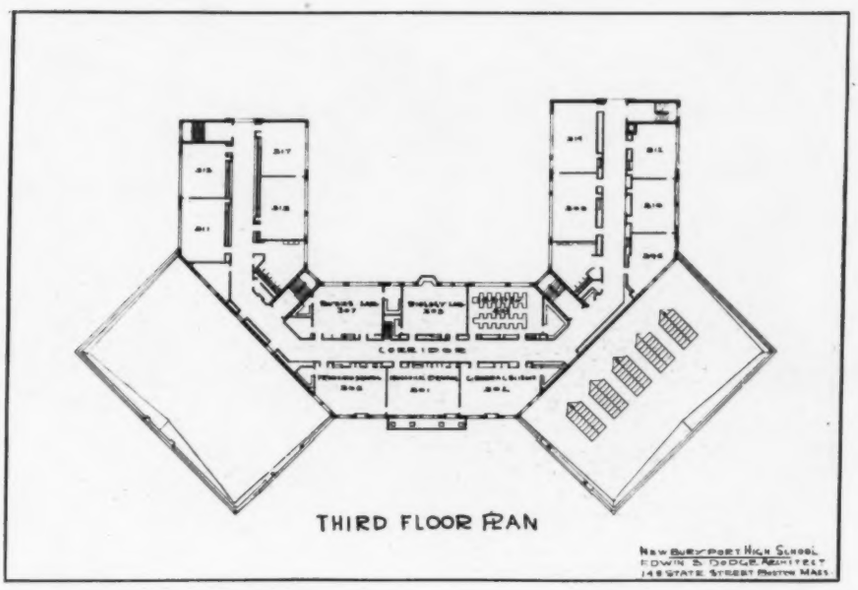


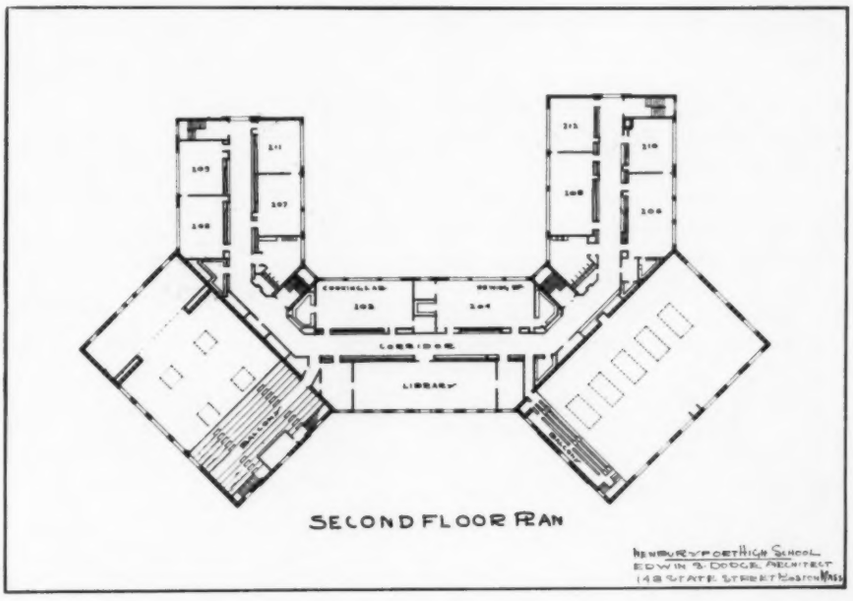
quarters, fire alarm system, fire extinguishers, grading and seeding around the school, and building walks, parking areas and roads.

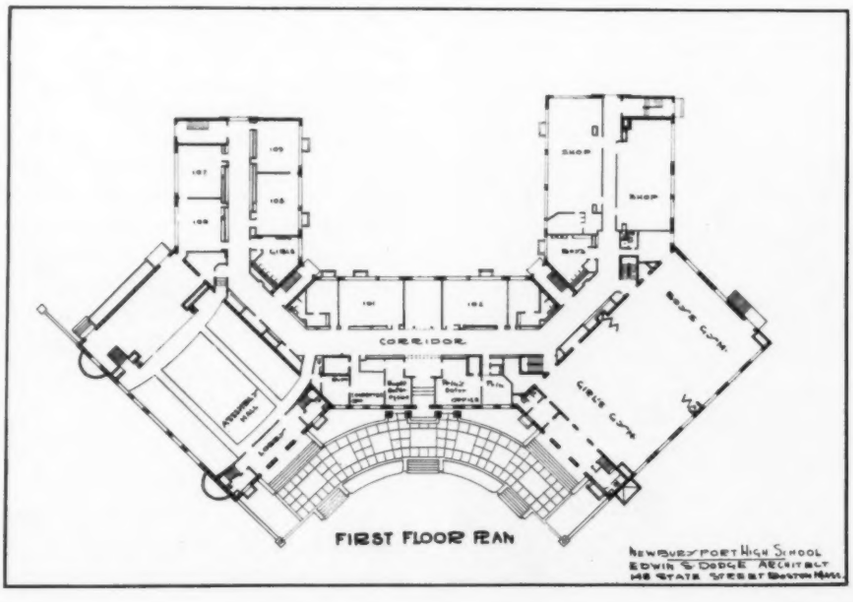
A list of some of the materials used in construction of the building follows: concrete in foundation, 1,400 cubic yards; concrete in floors, 1,970 cubic yards; brick, 1,011 thousand; ceramic and salt glazed tile, 60,000 pieces; granolithic finish floor, 16,000 square feet; asphalt tile floors, 40,000 square feet; wood floors, maple, 10,600 square feet; structural lumber, 154,000 board feet; structural steel, 257 tons; reenforcing steel in superstructure, 122 tons; reenforcing steel in foundation, 23 tons.

The services provided for in the new school are adequate and yet have been included with a consideration to economy of space and costs. The rooms vary in size.

Natural lighting was given a great deal of thought and the rooms were located with this in mind. The windows were placed on one side only so that light comes from the left of the pupils as they are seated or stationed. The architects' planning of the building in accordance with the existing elevations of the site (street elevation in front of building, 70 feet; first floor elevation, 93 feet; cafeteria and locker room elevation, 80 feet) has provided a building in which pupils are not quartered in basement rooms. Locker rooms and the cafeteria under the gymnasium and auditorium, respectively, although a story below the first floor of the school proper, are actually on the ground level. The advantages of such an arrangement are obvious.

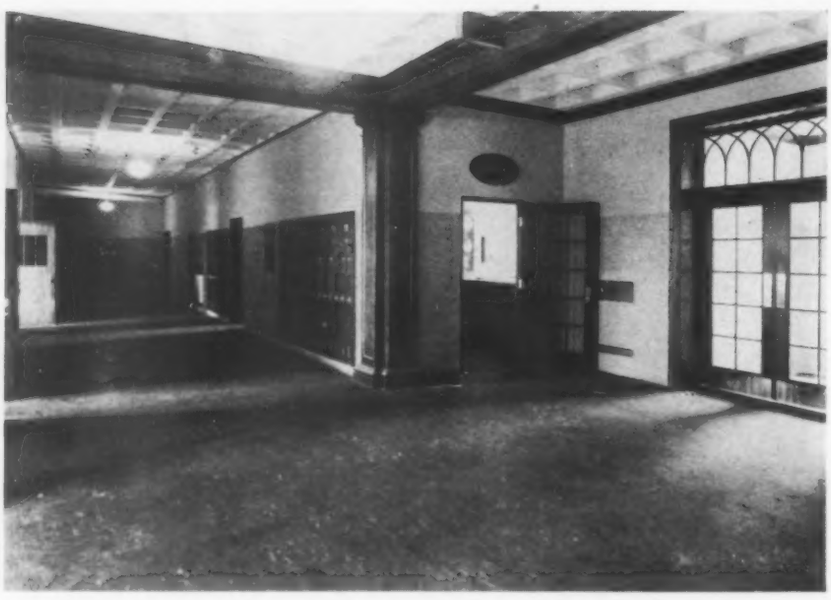






The gymnasium measures 60 by 90 feet and can be divided into a boys' and a girls' gymnasium, each 45 by 60 feet. Under the gymnasium on the ground level are located a boys' locker room with 450 gymnasium lockers and 50 full-size lockers, a shower room and a drying room, also a girls' locker room with 450 gymnasium lockers and 50 full-size lockers, 8 individual showers, a shower room and a drying room. There are also a team room with 35 full-size lockers, and an exercise room that can be used as a visiting team room with 35 full-size lockers.

An auditorium with balcony will



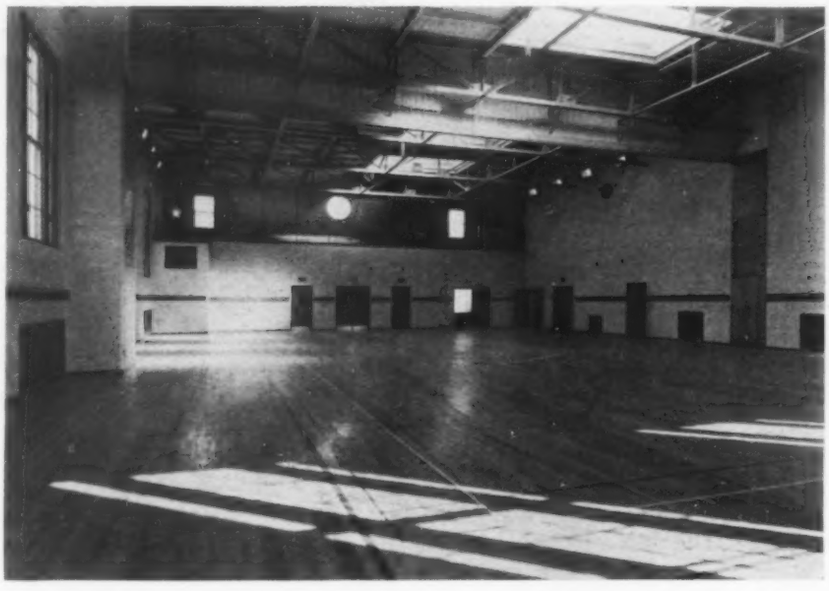
Three interior views—first floor corridor, gymnasium and chemistry laboratory. The gymnasium, 60 by 90 feet, can be divided to accommodate boys and girls separately. Lockers and showers are located on the ground floor.

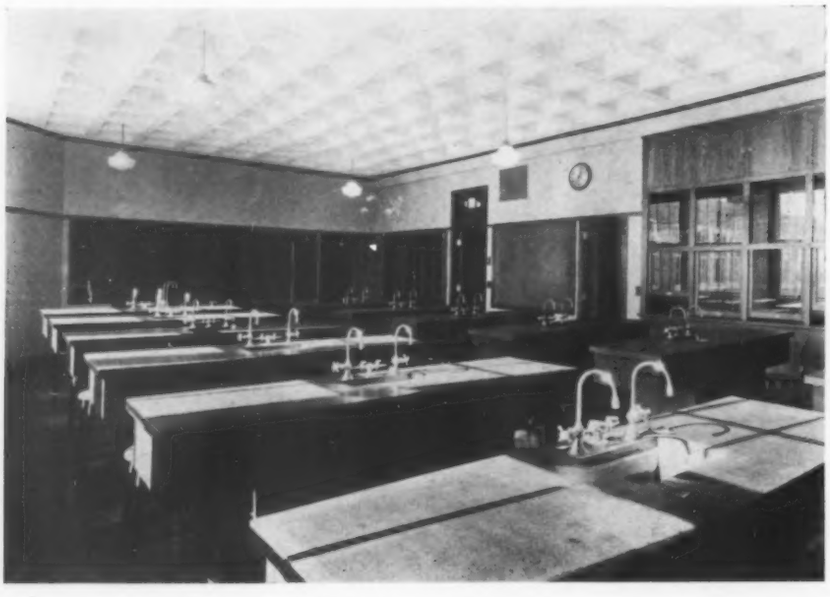
The third floor is given over to the chemistry laboratory, biology laboratory, physics laboratory, general science room, freehand drawing room and mechanical drawing room. There are also nine classrooms and toilets.

seat approximately 950 persons. The stage measures about 50 by 30 feet. Under the auditorium on the ground level are located a cafeteria, which will seat about 450 at one time, and a music room.

On the first floor are the superintendent's offices and school committee room, principal's offices, men teachers' room, women teachers' room, six classrooms, manual training shop, general shop and toilets for girls and boys.

The second floor includes a library that will accommodate approximately 100 pupils, with a conference room at one end and a guidance room at the other, also cooking room, sewing room, typewriting room, bookkeeping room, six classrooms and the toilets.





From an administrative point of view the building is uniquely arranged. The gymnasium wing can be completely isolated from the rest of the building. The same is true of the auditorium wing. The central portion of the building also can be cut off from the auditorium, gymnasium and classroom wings. The heat supply is sufficiently flexible to furnish heat to one or all of these services as needed and desired. In addition, the temperature of each room is thermostatically controlled.

The equipment is modern and much care was given to its selection by the school committee, the superintendent of schools and the high school principal, in accordance with standards of quality and price.

Good Start on Safety

IVAN A. BOOKER

The best equipment and the most satisfactory route become unsafe with an incompetent driver.

THE beginning of the school year is an opportune time to give special attention to safety in pupil transportation. Equipment has been in very little use, or perhaps not at all; drivers have not recently driven daily over their respective routes; motorists have had a few months during which children seldom have been numerous in the vicinity of school zone signs; pupils have had time to abandon safety habits not yet thoroughly established. Unusual precautions at the beginning of the year are, therefore, highly essential.

One important step in this program should be a thorough inspection of school busses with respect to safety features. In some cases alterations and repairs will have been made. Have these been done in a satisfactory manner? Is any further work needed before the bus is safe from the standpoint of mechanical operation? Additional equipment may have been acquired during the vacation period. Is this satisfactory in every way? Have any defects in the equipment developed during the summer, or are there weaknesses and unsafe features that hitherto have not been discovered?

If bus bodies have been removed from the chassis, for any reason, have these been properly and securely replaced? Do all bus bodies have sufficient strength? Are brakes and tires in good condition? Are the service and emergency doors in perfect order? Are lights, windshield wiper, horn, ventilators, speed control governor, emergency kit, fire extinguisher and other safety appliances in good repair and properly adjusted? Has the bus been properly cleaned and refinished, as necessary, both inside and out, during this vacation period? Have all dangerous situations been corrected as planned, such as, the installation of safety glass instead of ordinary glass, the attachment of suitable window grilles, the installation of hand rails, or the elimination of exhaust fumes by welding and sealing operations?

An assistant research director of the National Education Association advises meticulous checking of busses for defects early in the year and periodically.

The inspection of equipment at the beginning of the year should be unusually thorough—the first of a series of periodic inspections to keep equipment as safe as possible.

Some school systems make the annual inspection a countywide or regional safety convention. Bus drivers, mechanics, school officials, traffic officers and representatives from state departments of highway safety meet together on this occasion. Equipment is inspected and safe operating practices are discussed. Whenever this plan has been tried, favorable results seem to have followed.

At the opening of the school year a survey of every school bus route is advantageous. Certain new road hazards may have developed; changes in routing may need to be made; drivers new to certain routes may need to be acquainted with their new duties. Furthermore, in order to administer the transportation program in a satisfactory manner the superintendent of schools or his representative needs to have at hand complete information about each school bus route. He should have a transportation map

THE SCHOOL BUS ROUTE

County_____ Checked by_____ Date_____

I. The Route

A. From_____(School) To_____(Terminus)
B. Check which
1. Actual route ( )
2. Potential route ( )
C. Length of trip to nearest one-tenth mile (1 plus 2, below) _____
1. Distance from school to home of last pupil _____
2. Additional distance traveled by bus on trip _____
D. Number of bus or route _____
E. Name of driver _____
F. Check here if route is run in reverse order ( )

II. Class or Kind of Road

		From	To	Number of miles
A. Hard surfaced	( )[a]			
B. Gravel or chert	( )			
C. Sand, clay, or top soil	( )			
D. Graded	( )			
E. Unimproved	( )			

[a] If state highway, check in this column.

III. Condition of Road

A. Satisfactory (broad and well surfaced)	( )			
B. Narrow (less than 16 ft.)	( )			
C. Rough and bumpy	( )			
D Needs surfacing	( )			

IV. Consecutive Summary of Hazards

	Kind or nature of hazard[b]	Distance from beginning	Recommendations and comments[c]
A.			
B.			
C.			
D.			

[b] The following key may be used in describing kind or nature of hazard:

Blind curves	A	Needs gravel	G
Narrow bridge	B-1	Dangerous hill	H
Unguarded bridge	B-2	Bog or mud hole	M
Unsafe approach	B-3	Dangerous ravine	R
Needs repairs	B-4	Unbridged stream	US
Bad culvert	C	Right-angle turn	T
Deep ditch or wash	D	Railroad crossing	X
Unguarded fill	F	Highway crossing	Y

[c] Key for recommendations:
1. Urgent—should be remedied at once.
2. Should be remedied as soon as practical.
3. Driver should be instructed to use extra care and caution.

V. Summary: Status with Regard to Transportation

A. Well adapted in present condition ( )
B. Fair: passable at all times ( )
C. Impassable after prolonged rains ( )
D. Treacherous after any rain ( )
E. Could be well adapted by changes indicated under IV ( )
F. Hazardous at all times ( )
G. Totally unsuited for transportation ( )

Research Division, National Education Association

Adapted from a plan developed by Edgar L. Morphet, Florida State Department of Education

showing: (1) the location of the schoolhouse; (2) the points of the compass; (3) the various bus routes, shown in different colors; (4) the type of road surface on each portion of the bus route, and code symbols to show the condition of the road[1]; (5) arrows indicating the direction in which each bus travels, and (6) every driving hazard on the route, with attached suggestions for taking care of it; (7) the home of each driver, indicated by a square with a capital "D" beside it; (8) the point at which the first child is picked up, indicated by the letters "FP"; (9) each house from which children are transported, indicated by a circle at its exact location; (10) each bus stop, indicated by a triangle, and the number of children getting on at the stop indicated on the inside of the triangle; (11) the time the bus arrives at each designated stop, and (12) all alternate roads over which busses can be run.

The accompanying figure, reproduced from a recent issue of the *Research Bulletin* of the National Education Association, outlines a technic for making a route survey.[2]

Whether the staff of school bus drivers includes men new to the service or whether it is composed entirely of "old timers," the opening of school is an appropriate time for rededication to safe driving practices. Through group conferences, personal interviews, posters, bulletins containing driving regulations and every other available channel, the importance of safe driving should be emphasized. When new drivers must be set to work, the utmost care should be exercised in selecting operators who are competent, experienced and dependable.

Wise foresight of the type described is, to be sure, only the initial step. A thorough inventory of safety features at the beginning of the year must be followed by consistent and continuous attention to matters of safety.

[1] Possible code symbols for this item are:
OK—Satisfactory. Road in good condition for its type.
F—Fair. Always passable, but needs repairs.
IR—Impassable after prolonged rains.
SR—Slippery and treacherous after any rain.
H—Passable but always dangerous. Numerous road hazards.
NG—Totally unsuited for transportation.
In this item, however, and items 5 to 12, a system of code symbols other than that given can readily be devised. Any clearly defined symbols will be satisfactory.

[2] National Education Association, Research Division. "Safety in Pupil Transportation," Research Bulletin 14: 227 (Nov.) 1936.

Scrubbing by Mechanics

The use of the electric scrubbing machine is recommended by the Oregon Department of Public Instruction as the only satisfactory method of removing accumulated dirt by mechanical means. It is more rapid than any hand method unless strong chemicals are used; it requires less effort, and the results are far better. The advantages of the electric scrubbing machine over hand methods are listed in the Oregon manual as follows: (1) the weight of the machine displaces muscular force of the operator; (2) the brush is larger than brushes operated by hand; (3) the brush moves many times faster than a brush operated by hand; (4) electrical energy is substituted for human energy; (5) rest periods may be dispensed with, since guiding the machine is not fatiguing; (6) the work is more pleasant than scrubbing by hand; (7) the floor may be saved by the more sparing use of water and by the elimination of the use of strong chemicals, and (8) the electric machine may be used for other work, such as scraping and sanding, waxing and polishing floors and furniture.

"Healthful Sweets" is a Christmas exhibit demonstrating that feasting can be done within the limits of health.

Food Exhibits in the Cafeteria

By FRANCES STERN, MARY PFAFFMANN and MARJORIE FOSTER

DO SCHOOL children who lunch in the cafeteria each day want to know about nutrition? Would they like to know how food protects health, why one food serves their needs better than another, and how to judge a food irrespective of its taste and appearance? In reply to a questionnaire presented to the classes in an Indiana high school, 145 out of 858 pupils in the school —one-sixth of the total number—attested to an interest in nutrition and asked for information concerning it. How shall such a challenge be met?

In villages, towns and great cities, the shop windows tell, with varying degrees of interest and attractiveness, the story of the wares that are for sale. Would not a food exhibit in the school cafeteria likewise prove effective in influencing the choice of foods for health, as well as in meeting the desire of school pupils to know more about nutrition? The school lunchroom is the center for teaching proper food selection for good health habits and presents an opportunity for correlating classroom teaching with food experiences.

There are many methods and opportunities for helping young people obtain the authentic knowledge concerning the relation of food to the body, and also for extending this knowledge through the various school departments in correlation with their activities. It is the purpose here to describe some food exhibits that

should be helpful in the educational program of the school cafeteria. These exhibits already have proved their worth in various situations, in the school, the community center, clinic waiting rooms and assemblies.

The several departments of a school can cooperate to increase the effectiveness of these exhibits, for health education is a cooperative program.

Every exhibit calls for a definite plan, with careful consideration of the following factors: (1) location, for the most favorable showing; (2) color scheme and symmetry of form and grouping, for beauty; (3) attractive and unique materials, for interest; (4) accuracy and clear statement, for understanding, and (5) material to be distributed.

A picture, beautiful or impressive, is often used to present the theme of an exhibit, and as a focus for the whole arrangement. A background of velveteen or duvetyn will enhance the picture. Pictures, posters and photographs add interest by color or in the story they tell. Foods, real or in wax models, and cooking utensils give the feeling of humanness, and signs convey the meaning of the exhibit. Everything that is used in the exhibit must help illuminate the scientific fact that is its theme.

The Boston Dispensary has assembled an extensive collection of pictures in the course of years. Some of these pictures appear to be far removed from the purposes of teaching nutrition, but through imagination possibilities and relationships leading to their use have been recognized.

The cafeteria can give emphasis to the theme of an exhibit by displays of related posters or pictures on its walls. Maps, pottery and utensils of copper, brass and wood are significant in the study of geography, history and social science, as well as related to the cafeteria, when the exhibit depicts foreign food customs and how various peoples must provide food for body needs. "This is great for geography," remarked a junior high school lad who was studying an exhibit on "Foods of Many Lands" set up recently at a teachers' institute. He recognized a correlation. Often pupils like to contribute to such an exhibit.

Cooperation between the cafeteria and other school departments arises in other suggestions. As a study of clear and terse expression the English department might write the copy for signs. Commercial pupils might estimate the costs of foods and compare foods in terms of cost and food values. Pupils of physiology, chemistry, biology and other sciences might contribute to an exhibit teaching the part food plays in the body's

Each serving of these foods contains the same amount of calcium that is found in 2 tablespoons of milk.
Each serving of these foods contains the same amount of calcium that is found in 2 tablespoons of milk.

"How Milk Serves the Body" is the title of this exhibit. Displayed on the table are the following foods: 1/2 teaspoon grated American cheese, 3 tablespoons cottage cheese, 1/3 teaspoon cream cheese, 1 tablespoon evaporated milk, 2 tablespoons skim milk, 1 egg, 2 slices of whole wheat bread, 4 slices of rye bread, 1 cup cooked rolled oats, 3/4 grapefruit, 3/4 medium orange, 4 rounded tablespoons cabbage, 3/8 head lettuce, 2 medium sized potatoes, 2 rounded teaspoons spinach and 2 medium sized onions.

growth and development. Manual training pupils would become interested in an exhibit for which they had constructed apparatus, or made a drawing, to scale, of the whole layout for permanent record. While a home economics class is discussing a principle of nutrition as a part of its regular course, the lunchroom management should supply foods for visualization and stress their value in its service.

The homeroom teacher could integrate the interest of all departments by discussing the exhibit and by urging wise selection of foods in the cafeteria. The school health service might refer to the food exhibits in emphasizing the legend "Feed Your Body to Protect Your Health" and in combating underweight, overweight or specific diseases. The campaign for better nutrition in the school can influence the community by using the exhibit to awaken its interest in the facts of nutrition and in the bearings of the food supply and good food habits upon public health, economics and agricultural studies and movements.

The exhibit, then, has a purpose and a place in the activities of the school cafeteria—to help school children, as well as the adults of the community, visualize the nutritional requirements established by science. The school, in most instances, can depend upon its home economics department, lunchroom and allied departments to provide the personnel for this educational program. For a number of hours every day the pupils are exposed to explicit instruction and correlated discussion in the various departments, then they obtain experience at the lunchroom counter or in the cafeteria. The exhibit is a dynamic force, if it is made vital by the vision and interest of the children, teachers, school administration, parent-teacher groups, school publications and community newspapers, and by the community at large.

The health education department of the Boston Dispensary has developed a series of exhibits interpreting the principles of nutrition, and these are listed in a box on page 60.

Candies and cookies made with nuts, fruits, molasses and butter contain minerals and vitamins that protect health. They are the best kind of sweets for the family, especially for children.
They are "healthful sweets."
Santa Claus is making "Healthful Sweets." Ask for a copy of his recipes.
Healthful Sweets
Bring health and joy
Why?
Butter gives Vitamin A as fuel
Molasses gives Iron as fuel
Fruit gives Iron and fuel
Nuts give Protein and fuel

One of two exhibits on "Healthful Sweets." This one has on Table A: peanut cookie, whole wheat cookie, dropped whole wheat cookie, whole wheat cookie with raisins and with dates, molasses cookie and filled cookie. Table B shows the home of Santa Claus, with Santa making candies. Table C has in red and silver boxes various candies for which a recipe sheet is furnished. This is an effective Christmas exhibit.

Photographs and plans of these exhibits, with reproductions of the statements on the charts and signs, and a description of all materials used, and also of the color scheme, have been compiled in a loose-leaf book, to aid the teacher or health worker in arranging an exhibit. Four of these exhibits are reproduced in the photographs. The data, given in detail, need serve only as suggestions, to be adapted to the special situation. The general set-up and data accompanying these photographs may serve as blue prints to the worker constructing the exhibit.

Healthful Sweets is a Christmas ex-

hibit which demonstrates that holiday feasting can be done within the limits of health.

The child, absorbed in thoughts of Santa Claus, is charmed by the chubby, merry, bewhiskered little man who is making healthful sweets for the children of the world; by the winter-clad helpers who are packing these sweets into boxes; by the reindeer eager to leap away, and by the accessories that imagination would place in Santa's kitchen.

On the tables are boxes, suggestive of gifts, filled with healthful sweets—candies made with fruits and nuts, popcorn balls with molasses and cookies made with fruits, nuts, butter and whole grain flour. The mother will want to take home recipes that tell how these goodies are made.

The background is of sky-blue duvetyn, spangled with stars and snowflakes. Branches of pine from the woods are piled about the house. The story of healthful sweets is printed in white on red cardboard edged with gold. The red and gold boxes are tied with Christmas ribbons and tags.

For the older child and the adult, the message is the same, but the setting accents the wreaths, greens and candles of the festive season. On the table are brass candlesticks holding red candles. Cookies and candies are arranged in boxes, covered with cellophane and tied with red ribbons. Tin cans, painted a brilliant red, are filled with cookies and tied with gold ribbons. A large brass tray in the center contains cellophane envelopes each holding a single cookie. The attached Christmas tag tells the number of cookies the recipe will make and the cost. The signs, wreathed in greens, are printed in white on red cardboard. Recipes are distributed with both exhibits.

How Milk Serves the Body is an exhibit to demonstrate that milk is rich in calcium, the food constituent needed for building bones and teeth.

A bottle of milk is in the foreground. Below is a picture of the skeletal structure, with the foods that contain calcium. Amounts of various other foods whose calcium content is equivalent only to that of two tablespoons of milk are displayed on the table. When the observer learns that he would have to eat eight times any one of these portions to secure the calcium that a glass of milk alone provides, he is impressed with the calcium content in milk.

The color scheme is black and white. Black velveteen is an effective background for the milk bottle, set in a deep frame. Crystal glassware shines against the blackness, and tall white candles give unity. The exhibit is simple in detail and easy to arrange.

Information for distribution is printed on the back of the folder "Feed Your Body to Protect Your Health" and includes a list of various foods in amounts that are equivalent in calcium.

Iron for Red, Healthy Blood is used to demonstrate the selection of foods to fulfill the body's daily iron requirement.

The facts in this exhibit are presented in slightly more technical form and language than in other exhibits. The head of a common pin weighs one milligram. The black velvet pincushion, scarcely visible in the photograph, but prominent in the exhibit, displays the heads of fifteen common pins, the equivalent to the weight of the body's daily requirement of 15 mg. of iron. This is explained in a framed sign back of the pincushion, and in an opposite frame, on which are mounted 15 one-milligram weights.

Each food displayed on the table contains 1½ mg. of iron. A little arithmetic explains that a selection

List of Exhibits Described

Our Daily Bread
How Milk Serves the Body
Vitamin C in Fresh and Canned Fruits, and Their Comparative Costs
Fruit as a Source of Vitamin C, Iron and Sugar
Healthful Sweets
- Santa Claus Making Healthful Sweets
- Butter as an Excellent Source of Vitamin A
- A Winter Exhibit

How Eggs Serve the Body
Iron for Red, Healthy Blood
Milk and Public Health
- The Care of Milk
- Methods of Teaching the Food Value of Milk
- Milk—Its Use Throughout the World

Food for the Family
A Protective Diet

A "Protective Foods" exhibit has a table display of milk, whole wheat bread, rye bread, butter, oatmeal, eggs, cabbage, escarole, chicory, dandelion greens, kale, broccoli, lettuce, pepper, tomato, carrot, oranges, grapefruit and tangerines. In front are photographs of three meals.

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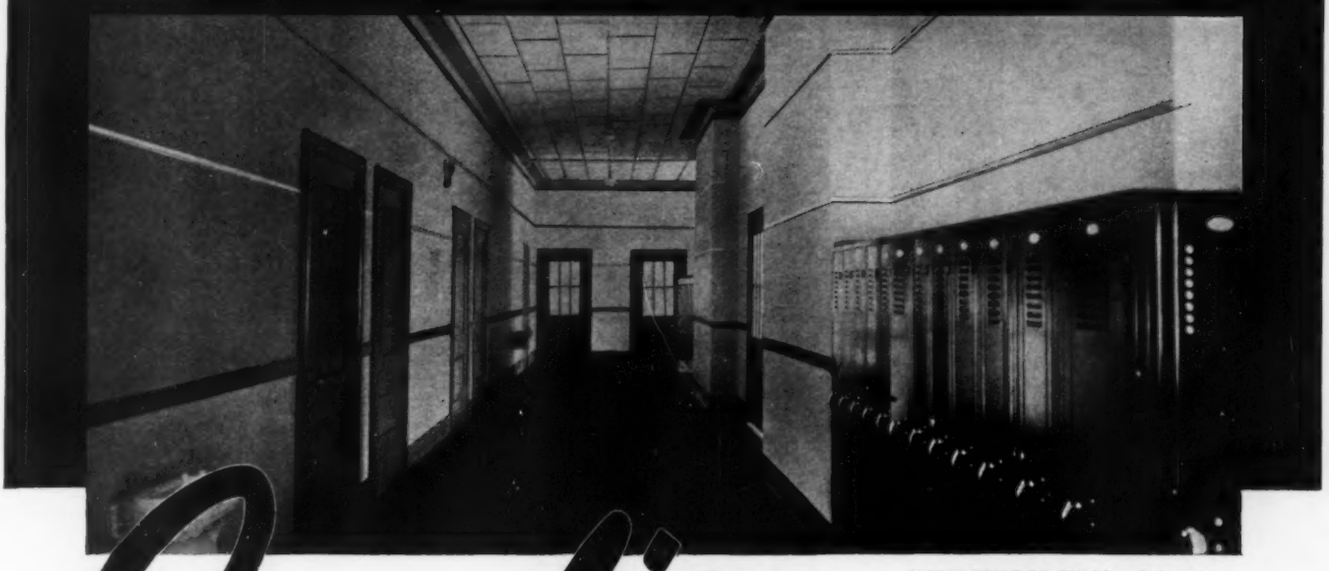

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- **INSULITE quiets sound — a definite aid to study and attentiveness.**
- **INSULITE minimizes infiltration of dampness and humidity.**
- **INSULITE reflects light without glare.**
- **INSULITE provides cheerful and modern surroundings.**

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"Iron for Red, Healthy Blood" is a popular exhibit. On the table are displayed 5 slices of whole wheat bread, 4 medium sized prunes, 1 tablespoon dried lima beans, 1 egg, 1 large white potato, 1 tablespoon molasses, 1 level tablespoon oatmeal, 3 tablespoons spinach, 1 cup dry macaroni and 15 lettuce leaves. Framed signs explain dietary needs.

of foods providing ten times that amount will furnish the day's requirement of iron. The leaflet for distribution includes a list of more than twelve foods in amounts containing 1½ mg. of iron. An example illustrates a choice of ten foods containing the needed amount of iron for the day.

The vivid orange and green combination of the illustration is offset by a background of black velveteen, and is repeated in the colors of the plates, bowls and doilies on the table. The picture is an advertisement, lacquered, varnished and bound for preservation.

With the advancing knowledge and interest in the mineral food constituents, as well as in the vitamins, the exhibit of a protective diet offers a comprehensive basis for the selection of food.

Charts in simple, inexpensive black frames were enlarged and colored from the leaflet "Feed Your Body to Protect Your Health," printed by the New England Dairy and Food Council. The central picture, an advertisement, serves as an appropriate companion piece to the abundance of natural foods grouped below. In front of the foods are photographs of three meals, typical of a day's meals adequate in amounts and kinds of food for the protection of health. The signs emphasize the body's need of minerals and vitamins. The leaflet, "Feed Your Body to Protect Your Health," is used for distribution.

The materials for this exhibit are easily obtainable, and the arrangement is simple and effective in its message.

Fruit, a Source of Vitamin C, Iron and Sugar, an exhibit that can be used at any season, is also one that can emphasize a particular fruit when it is in season.

The central chart states the theme of the exhibit, which is amplified in the charts at the side and below. Cuts from the folder "Feed Your Body to Protect Your Health" indicate uses of vitamin C, iron and sugar. The background is of rich, deep red duvetyn, and the cardboard of creamy color accented by a black edge. Pictures of fruits were cut out of magazines, fitted and overlaid on a stiff cardboard, lacquered and varnished.

The tables are covered with red duvetyn, and the dishes and central tray are of cream color with the tray edged with black. Fruits are arranged to correspond to the stories told in the signs. To urge the use of fruit for sugar, individual signs are attached to the fruits on the tray stating the content of each in terms of lump sugar.

FOOD FOR THOUGHT

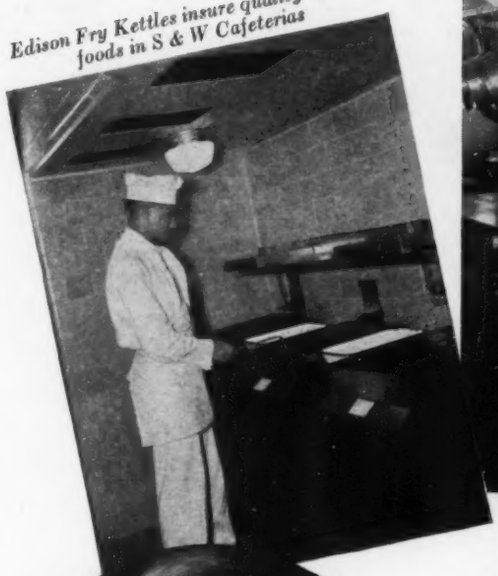
• School lunchroom directors will gather in Chicago November 11 to 12 for the first convention of the National School Cafeteria Association.

Half an hour will be devoted to each topic on the program — fifteen minutes to the speech and fifteen minutes for subsequent discussion. One morning and noon has been set aside for visiting school and college lunchrooms in Chicago. A commercial exhibit of foodstuffs and equipment will be connected with the convention.

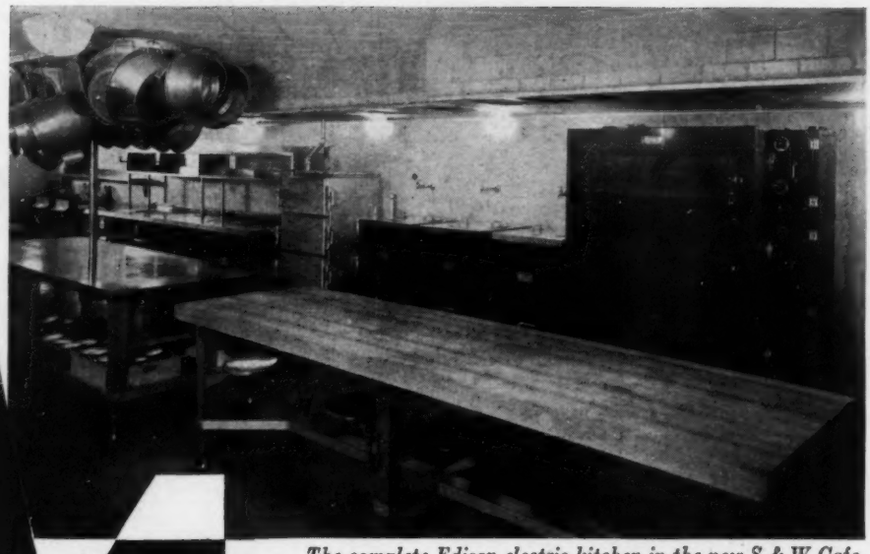
Program topics and some of the speakers are as follows: opportunities for trained people in school cafeteria work and the advantages of higher education in this field; proper accounting procedure in school cafeterias, R. J. Wichmann, auditor-cafeteria supervisor, Santa Monica schools, Santa Monica, Calif.; feeding college students, Bertha M. Smyers, purchasing agent and dietitian, Baylor University, Waco, Tex.; the school lunchroom's relation to pupil health; the central kitchen, Alice R. Certain, director of school cafeterias, Jacksonville, Fla.; latest trends in school restaurant equipment; the relationship of the commercial restaurant and the school lunchroom; advantages of a central warehouse; special problems involved in elementary school lunchrooms; the value of a school lunchroom to the educational program, and the value of a school lunchroom to the pupil's mother. The program is not as yet fully completed.

• School lunchroom directors and managers will meet in Cleveland October 29 as part of the Northeastern Ohio Teachers Association. Much of the program will be given over to discussion of various phases of school feeding and among the speakers will be Mary Hemmersbaugh, supervisor of school lunchrooms, board of education, Cleveland; Mary Farnam, director of cafeterias, board of education, Cleveland Heights, Ohio, and Dr. Mary deGarmo Bryan, head of institution management, Teachers College, Columbia University.

• Fifty per cent of the schools of Adams County, Nebraska, cooperate in the plan for hot lunches. Each family brings food and drink already prepared in a glass jar. When the jars are placed in a pan of hot water at recess time, the food is properly warm by noon. Desks are used for tables (covered with oilcloth), and a committee serves. Children receive training in table manners, the teacher is relieved of responsibility and patrons are appreciative of the project.



Edison Fry Kettles insure quality of fried foods in S & W Cafeterias



The complete Edison electric kitchen in the new S & W Cafeteria in Knoxville, Tenn.

Frank Sherrill, President, S & W Cafeterias

4 S & W CAFETERIAS ARE EDISON ELECTRIC

• SIGNIFICANT was Frank Sherrill's choice of modern Edison electric equipment for three of his famous S & W Cafeterias in Washington, Charlotte and Chattanooga, a few years ago.

Now comes his further indorsement of Edison equipment, a complete Edison electric kitchen in the S & W Cafeteria in Knoxville, Tenn., newest unit in the expanding chain.

Mr. Sherrill doesn't buy on hearsay, whether it's napkins or kitchens. He investigates. His choice of Edison equipment was made only after he had proved to his own satisfaction that it would stand up in daily service, operate with greater economy and cook food with the delicious tastefulness that customers expect in cafeterias bearing the S & W name.

Accurate Heat Control

Why don't you tear a page from Mr. Sherrill's book of experience and modernize your kitchen with electricity? Electric cookery permits accurate and automatic control of heat, which assures uniform results every time. Edison Electric Kitchens provide a new standard of food quality, new economy for the profit side of your ledger, and safety in every cooking operation. They help bind your customers to your restaurant or cafeteria with a bond of good will that brings them back again and again.

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About Termites

All degrees of fraud and deception are being practiced in the name of termite control and prevention. Only recently in Mississippi, Clay Lyle, state entomologist, issued warning against the so-called racket, prompted by an experience that occurred when a building at the Mississippi State College became infested. A large commercial firm called in for consultation submitted an estimate of $190 to rid the building of these pests and make it termiteproof. The offer was rejected and the work accomplished successfully for $25.

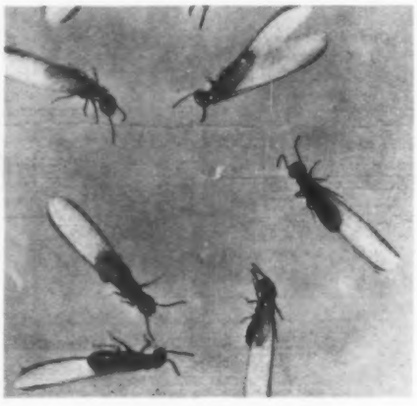
We Go to an Authority

It is always best to consult an authority, and when it comes to termite control no one is in a better position to offer advice than Thomas E. Snyder, senior entomologist, division of forest insect investigation, bureau of entomology and plant quarantine, U. S. department of agriculture. Let's see then what

Mature termite workers.

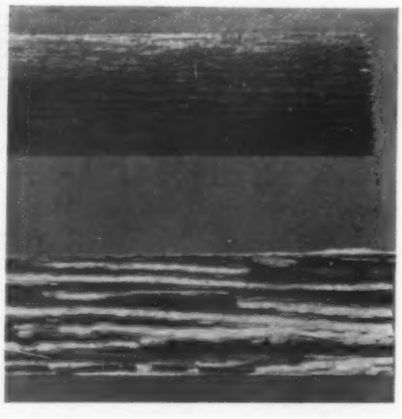
Mr. Snyder has to say on the subject. First he emphasizes the fact that the means of stopping termite injury in a building are substantially the same as those to be employed in new construction to prevent entry of termites.

"Inasmuch as contact with soil moisture is absolutely essential to the life of ground-inhabiting termites, reconstruction of a type that permanently makes impassable the ground connections between the parent soil colony and any building will result in the prompt death of any termites remaining in the woodwork, furniture or contents of the building, even if they have reached the second or third floors. However, if through water leakage or other source, woodwork is kept permanently moist, termites cut off in the building may continue to work as long as this condition lasts. This applies particularly to damp corners of basements or similar areas that catch leakages from water pipes in the bathrooms and kitchens.



Winged subterranean species.

The most lasting and effective remedy, Mr. Snyder indicates, is the replacement of wood in or near the basement of the building with concrete. Second, in order of effectiveness and durability, is replacement of such wood with treated wood or timbers. In regions of excessive termite damage it is better to employ under both methods protective shields. By this means contact between colony and building is permanently broken and relief from termite damage is assured. This means that joists imbedded in concrete and the basement floor and baseboards should be replaced with any type of plain or ornamental concrete. In basement rooms so constructed, movable furniture of wood, and also built-in furniture, particularly if resting on concrete footings, can be employed usually with complete safety.



They are expert wood-carvers.

"To give the capping and facing to basement walls of frame buildings it is rarely necessary to jack up the building; usually it is possible to remove the upper tier of brick or upper portion of the masonry unit in sections and replace with Portland cement mortar and suitable capping of slate or mortar.

"When poor grades of mortar have been used in masonry walls below the ground, it may be necessary to coat the outside, and if necessary also the inside of the wall with Portland cement or concrete to keep termites from boring through. Termite shields of metal can easily be inserted over or in the masonry foundation of buildings.

Soil Poisons Uncertain

"The possibility of stopping, for a temporary period at least, termite work in buildings by means of soil poisons placed about the foundations is indicated by experiments which have been under way for several years by various agencies interested in termite control. The use of such soil poisons is, however, still much in the experimental stage and on present information cannot be recommended as a permanent remedy. On the other hand, when termite reconstruction herein recommended is deemed by the owner to be impracticable or too expensive, the following type of soil poisoning may be used and should give temporary relief:

"The most promising of the soil poisons for such use is a full strength of crude liquid orthodichlorobenzene. This chemical should be applied after a trench has been dug 30 inches deep (in no case lower than the top of the footing), and at least 12 inches wide at the top, around the foundation walls and piers supporting the main structure or porches. The soil at the bottom of the trench should be saturated with full-strength orthodichlorobenzene at the rate of 1 gallon per ten linear feet. The soil then should be replaced to within 3 inches of the surface and the treatment repeated. Before making such application, all wood débris should be removed from near the wall of the building and any earthlike shelter tubes over the foundation walls should be broken off. This liquid can be obtained at a reasonable price from wholesale chemists or insecticide manufacturers.

"The cautions to be observed in the use of this chemical are not to let it come in contact with the face and hands, as it burns slightly, and it is distinctly painful if it gets into the eyes. In applying it to a closed space beneath the building, the operator should not remain subject to the fumes too long. It is desirable to obtain good ventilation while applying the chemical."

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Business Officials Have Biggest Attendance at Baltimore Meeting

THEY packed them in when the National Association of Public School Business Officials held its twenty-sixth annual convention at Baltimore, October 11 to 15. It was the biggest attendance yet recorded. Even at the opening session, the ballroom of the Lord Baltimore Hotel was crowded. By the time the round table sessions were called the delegates were fairly hanging from the rafters.

It was all very encouraging and augurs well for the future of the association which, prior to the Minneapolis meeting two years ago, floundered badly. That convention established the pattern; St. Louis set it firmly, and Baltimore followed through effectively. The public school business officials have definitely found themselves.

Cafeteria Much Discussed

The response to the various talks was enthusiastic and when discussion was invited one delegate after another got on his feet and asked questions based on his own specific problems. In no session was this more forcibly demonstrated than on the occasion when the importance of school feeding in the health program was presented by Prof. Phyllis Sprague, State College, Pa., and Dr. Mary deGarmo Bryan, head of institution management, Teachers College, Columbia University, and editor of the school feeding section of The NATION'S SCHOOLS.

The need for nutritious food well cooked and attractively served is vital, all agreed, and this department should be in the hands of a trained dietitian. A motion, based on a recommendation by Doctor Bryan, was made and seconded that a committee be formed to work with various cafeteria groups in setting up a standard cost accounting procedure system for school cafeterias.

Professor Sprague suggested that a modern, well-equipped lunchroom does not mean a well-balanced meal, even if a qualified dietitian is in charge. "Money spent in brightening up the room, reducing the noise and providing adequate ventilation and lighting will prove to be money well spent," she said.

Cafeteria operation was only one of many subjects upon which the attention of the delegates was focused during the week. In the session on new construction, air conditioning was touched upon by J. L. Carlisle of St. Louis. "The modern air conditioning system," he said, "should be designed to furnish proper temperatures and humidity for year round operation. For although summer air conditioning is desirable in some parts of the country, winter air conditioning is most desirable in all locations from a health standpoint."

The selection of school supplies was just one phase of that general subject considered at a sectional meeting. W. E. Strickler, superintendent of supplies, Pittsburgh, urged study along the lines of standard lists, quantity allotments, simplification and standardization of supplies.

Finance was assigned a special session at which William J. Schultz, professor of the school of business and civics, College of the City of New York, told the delegates that they must become "lobbyists" if they want to get money enough to direct properly the business of the school they represent. "Taxpayer pressure groups," he said, "are organizing to fight your requests for additional taxes or higher tax rates to produce more school revenues. They are more than ready to engineer a reduction of school appropriations if they see the opportunity in order to cut their tax burden. You have no choice but to fight them."

Recommends Permanent PWA

Recommendation for a permanent Public Works Administration was made by Sidney Hall, state superintendent of instruction for Virginia. Pointing out first that PWA grants had permitted many hard hit communities to build badly needed schools, he said that since 1928 there has been an increase of 178 per cent in the number of pupils enrolled in public schools over the nation.

Dr. John Guy Fowkles, University of Wisconsin, recommended a serious study of the financial and business direction of extracurricular activities. While many professional educators and laymen contend that nonclassroom activities are more valuable in adult life than any other school work, the source of money for them is greatly in need of change, he declared.

Accounting was discussed at a sectional meeting. According to H. A. Bell, Gary, Ind., "accrual accounting is necessary for an accurate determination of costs. Moreover, there can be no real budget control without charges being made as they accrue."

Public relations, or rather school interpretation, must depend upon a philosophy, in the opinion of Belmont Farley of the National Education Association. And the school interpretation program, to be accomplished successfully, must be a program and not a campaign. Some of the techniques of publicity must be understood or mastered. This is an important part of a school executive's job. The school business executive should also realize that publicity must have news value.

Symposium on Bus Problems

Considerable attention was directed to the importance of clerical personnel. Dr. Sherman G. Crayton, State Teachers College, Buffalo, N. Y., expressed belief that the clerical personnel should be elevated to a professional status. They will achieve recognition, he feels, when they are paid salaries commensurate with their service.

The whole question of transportation must be regarded from a standpoint of safety and all regulations must consider the immaturity of the passengers. This statement, made by Dr. Charles H. Elliott, commissioner of education, Trenton, N. J., was endorsed by the two other speakers in a short symposium on transportation — Lloyd M. Theurer, business manager, Logan, Utah, and R. P. Orchard, clerk-treasurer, Bedford, Ohio. Doctor Elliott described in detail the New Jersey regulations for school busses, pointing out that in thirteen states only are inspections of school busses required. In Ohio, Mr. Orchard stated, the majority of busses are owned by the school districts. In his district the three drivers who are employed fill in during the day by doing maintenance work, caring for the athletic field and assuming other duties.

There were thirty-four attractively set-up exhibits. Between sessions there were trips to the Baltimore schools, sight-seeing excursions about the city and the usual social events with Baltimore doing itself proud as host.

In the election of officers, John S. Mount of Trenton, N. J., retired as president in favor of R. W. Hibbert of St. Louis. Albert Austermuhl of Camden, N. J., continues as treasurer, as does H. W. Cramblet, Pittsburgh, as secretary. H. C. Roberts of Sioux City, Iowa, is the new vice president and his position of director is assumed by John C. Cate, Glendale, Calif. John W. Lewis, Baltimore, completes the board.

Unusual Flexibility + Dual Use of Space = ECONOMY

THE DESKOR CHAIR WAY

"The Deskor Way" increases the capacity of existing buildings and definitely reduces the per pupil cost of new school buildings. Unusual flexibility in administration and dual use of school space is made possible. Installations made and schools built "The Deskor Way" during the past 8 years (complete list of installations and schools built gladly sent on request) give positive evidence of the successful accomplishment.

Here is a specific example of the economies possible in the construction of a $300,000 Junior High School project by using a convertible type of furniture on a main floor of an auditorium and in one or two other rooms and by providing for the dual use of space. Five architects were requested to submit plans in competition for this "Deskor Way" of building. The plans were judged anonymously and those selected disclosed some very interesting facts.

A building could be built "The Deskor Way" to accommodate 950 pupils and have an auditorium with 950 seats for exactly the same cost as the building originally planned to accommodate only 830 pupils with no auditorium. As it would have its own auditorium, it could be built in a more strategic location in another part of the town.

The comparative plans demonstrate that if a building should be built "The Old Way" to accommodate 950 home stations, which "The Deskor Way" produced, it would cost $90,000 more, and if an auditorium should be added there would be an additional $50,000 required, which would make the cost per pupil $463 as against $316 for "The Deskor Way."

Result — a building built "The Deskor Way" would save $140,000 which is nearly one-third of the cost! (This comparison is for such building to have an auditorium and 950 home stations.)

An analysis of the plan submitted.

"The Old Way" 820,230 ft. cubage (no auditorium)			"The Deskor Way" 835,000 ft. cubage (with auditorium seating 950)		
		Home Stations			
660	(20)	Class Rooms	(14)	490	
70	(2)	General Science	(2)	70	
.....	(1)	Drawing Room	(1)	35	
.....	(1)	Music Room	(1)	40	
.....	(No)	Auditorium	(1)	315	
730		Total Home Stations		950	
		Pupil Locations			
650	(20)	Class Rooms	(14)	490	
70	(2)	General Science	(2)	70	
35	(1)	Drawing Room	(1)	35	
80	(1)	Music Room	(1)	81	
25	(1)	Manual Training	(1)	25	
36	(1)	Sewing	(1)	36	
36	(1)	Cooking	(1)	36	
90	(1)	Gymnasium	(1)	90	
1032		Total Pupil Locations		863	
81.7%		Maximum Efficiency		81.7%	
843		Auditorium Study Seats at Desks		705	705
0		(also available for recitation)		315	
0		Maximum Efficiency		81.7%	
				257	257
843		Total Pupil locations (Maximum Efficiency)			962

In "The Old Way" (Maximum Efficiency) there are many more pupil locations (843) than there are home stations (730). In order to accommodate more than 730 pupils it would be necessary to add more home rooms with "screwed-down" seats, but such action would also increase the number of pupil locations which would continue the disproportion.

In "The Deskor Way" (Maximum Efficiency) there is the correct number of pupil locations (705) for a 700 pupil school. This reduction is made possible because in addition there are available in the auditorium 257 study seats (maximum efficiency) making a total of 962. This is almost identical with the home stations (950.)

SAVE UP TO ONE-THIRD COST OF CONSTRUCTION

The use of the Richard & Wilcox electrically operated Sound Proof Folding Walls and Deskor Chairs means a saving up to one-third of the construction costs.

Be sure to ask for complete data on these two important savings. Save on your new buildings and on your remodeling jobs.

Complete details on this project sent on request, or better still, let us estimate the saving you can make by building "The Deskor Way" on your school project.

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NEWS IN REVIEW • • • •

Passing of Womrath

Funeral services were conducted in Lakewood Chapel, Minneapolis, on Thursday, October 14, for George F. Womrath, former assistant superintendent of the Minneapolis public schools, who died Tuesday. Burial was in Lakewood Cemetery.

Mr. Womrath was assistant superintendent in charge of business affairs from the time he joined the Minneapolis school system Mar. 1, 1915, until his resignation Sept. 13, 1937. In respect to his memory, the board of education central offices and shops closed at 2 o'clock on the day of the funeral.

In the Board of Education School Bulletin (issue of September 16) I made the following comment on the loss of Mr. Womrath.

"Throughout his tenure, Mr. Womrath worked successfully for a high degree of efficiency in the operation of the schools at a minimum of expense. Toward that end, he devised and introduced many money and labor-saving innovations.

"These included the Janitor-Engineer School, improved accounting methods and the development of a highly efficient architectural-engineering and central shop system for the Minneapolis public schools."

Mr. Womrath had been in failing health for several months and had been unable to be at his desk since last April. Except for this final absence from duty, Mr. Womrath had missed only nine days for illness in his more than twenty-two years' service in the Minneapolis schools.

Born June 25, 1873, at Philadelphia, he was sixty-four years old at the time of his death. He was a graduate of Lehigh University and a member of Psi Upsilon fraternity. He engaged in private engineering in New York City for several years and was an industrial cost production engineer in Minneapolis for four years before accepting the post in the Minneapolis school system. This position he won through civil service qualifications, including a high rating in a competitive examination.

Because of the success of his methods in Minneapolis, Mr. Womrath was selected to conduct summer courses for three successive years at Teachers College, Columbia University, beginning in 1926. He also taught school business administration at summer sessions at the University of Minnesota from 1929 through 1936.

He was drafted to have an active part in the survey of the Chicago school system in 1931 conducted under the supervision of Dr. George D. Strayer of Columbia University.

Mr. Womrath was president of the National Association of Public School Business Officials for the year beginning in May, 1920. He was director of the association's conventions in Minneapolis in 1920 and 1935. He also served on many of the organization's committees. His desire to "tend to business" at conventions was a byword in the association.

His ideas on school business procedure were expressed in his book, "Efficient Business Administration in Public Schools," published in 1932. He wrote frequently for professional publications.

One of Mr. Womrath's outstanding contributions to the Minneapolis schools was the Janitor-Engineer School. With Dr. C. A. Prosser, of the Dunwoody Industrial Institute, Minneapolis, he developed the plan for organized, centralized training and retraining of janitors and engineers employed in the school system. Started in 1915, shortly after Mr. Womrath entered the system, the plan still is in operation.—CARROLL R. REED, *Superintendent of Schools, Minneapolis, Minn.*

INSTRUCTION

Student Grading Questionnaire

Reversing the practice of twelve school years, last June seniors of the Garfield Heights High School, Cleveland, Ohio, were permitted to grade the faculty and the school upon its effectiveness. A questionnaire was submitted to the ninety-six members of the graduating class by Supt. Harold R. Mauer. Responses were received from fifty-nine. The results of the questionnaire are interesting as an index to the efficiency of the school and scholastic interest of the pupils.

Sociology led all subjects in popularity. Reasons for preference were varied in the extreme, but practicability, use for future guidance and provision for self-expression dominated.

The subject least favored was English with history a close second. Geometry and Latin were next in rank for disfavor. As contributing causes to the unpopularity of these subjects, classroom procedure and teaching methods seemed to bear the chief blame.

Teacher qualities most admired were fairness, honesty and personality in the order named with sense of humor running a fairly close fourth.

For the "things" which had given most satisfaction during the school course, twenty-six pupils mentioned participation in clubs, twenty named extra-curricular activities, fourteen confined their greatest interest to intramural sports and ten registered lasting friendships as a significant contribution.

As to the value of high school studies and experiences, the acquisition of understanding, self-confidence and cooperation were most frequently mentioned.

High school education failed to help eighteen pupils because studies were impractical, they declared. Eight considered their training handicapped by required subjects. Four accepted the responsibility for failure of the school to benefit them adequately.

Sex Education a Success

The public schools of Winnetka, Ill., which have been pioneering in the field of sex education for about fifteen years, claimed success in this program in a recent interview granted the *Chicago Daily News*.

The purpose of the program, which allows for rudimentary sex education as early as the fifth grade, is to "try to create healthy attitudes" toward problems that vex the pupils, not only in matters of sex hygiene but in related fields of biology and sociology.

S. R. Logan, principal of Skokie Junior High School in the Chicago suburb, explained that in the earlier grades the room teacher is entrusted with conducting a daily half-hour "forum" program, in which questions that may be vexing the young minds are answered.

"Below the sixth grade we find the informal conversational method of instruction more effective," he said.

"At the junior high level, in the sixth, seventh and eighth grades, the biology course is more comprehensive," he continued. "In the seventh grade pupils begin with field trips, studying lower animal forms, finally advancing to mammals and man. By this time the children are familiar with terminology and are unself-conscious about discussing anything connected with natural processes — be it breathing, assimilation or reproduction."

Hobart Host to Justices

Hobart College at Geneva, N. Y., will be host to some 300 justices of the peace of New York State at a four-day training school next spring, according to a recent announcement by Dr. William Alfred Eddy, president. The program will be given under the auspices of the

for MODERN SCHOOL AUDITORIUMS

IN recent years there has been an ever increasing demand for more comfortable and attractive school auditorium seating. Styled distinctively to the trend toward better seating, are many Heywood-Wakefield auditorium chairs which combine attractive appearance and comfort . . . yet do so at a surprisingly reasonable cost. *The chair shown to the right,* for instance, was designed and developed for the famous V. P. I. at Blacksburg, Virginia. The French Gothic motif of the aisle standard may be finished in color combinations to harmonize with any interior decorations. May we tell you in detail about this and other good looking, practical Heywood-Wakefield auditorium chairs?

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PROMPT care is important in preventing infected wounds. Even minor wounds may become infected when antiseptic treatment is delayed. Children and adults report injuries promptly when Mercurochrome is used, because treatment is not painful.

Mercurochrome, H.W.&D.
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is non-irritating and exerts bactericidal and bacteriostatic action in wounds. Be prepared with Mercurochrome for the first aid care of all minor wounds and abrasions. In more serious cases, consult a physician.

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Baltimore, Maryland

After a thorough investigation of the evidence for and against at the close of the last period of acceptance, the Council on Pharmacy and Chemistry of the American Medical Association again reaccepted (1935)

MERCUROCHROME, H. W. & D.
(Dibrom-oxymercuri-fluorescein-sodium)

New York State Association of Towns. Courses will be given by well-known justices of the peace, prominent attorneys associated with and practicing in town courts and specialists in the field of sociology and crime prevention. The college has offered its facilities for a series of training courses for town and county officers.

Elementary Flower Show

Civic pride begins with the kindergarten in Detroit where children from the kindergarten through all grades of the school presented exhibits as part of the observance of Flower and Garden Exhibition Week.

The exhibit is representative of the work of school children in the various buildings. The aim of the project was to make the show educational, with no prizes other than ribbons, rather than to have the exhibit a competitive affair. Only plants, vegetables, and flowers from the home and school gardens were admitted. Quality and not quantity was stressed.

The vegetables included various kinds of gourds, midget tomatoes, squash and various "vegetable characters." Cut flowers were arranged in vases.

Civics From the Harbor

A month of daily ferry boat trips for New York City secondary school pupils was inaugurated this fall for the study of the civics, geography and government from the waterfront instead of in the conventional classroom. Two trips lasting three hours were made daily up until October 20. Although the boats were built to hold 1,200 persons, only 600 pupils were taken on each trip. There was one teacher for each twenty pupils. Loud-speakers were installed on the ferry boats, through which the teachers lectured.

Coordinate Vocations

A reversion to the trade apprenticeship system is being experimented upon at the Magee High School, Magee, Miss., a school receiving aid from the federal government for vocational education.

Four members of the faculty are vocational teachers. One serves as coordinator and determines the vocation the pupil is best fitted to enter and then arranges a year's apprenticeship under a skilled worker in that field. Questionnaires are prepared by the vocational teachers and filed by the pupils. A careful study is made of the answers by each homeroom teacher, who advises the pupils regarding the relation of their courses of study and their vocation.

If a pupil appears to be inclined mechanically, the coordinator arranges with a local master mechanic for the pupil to serve him, without pay, each afternoon for a year as an apprentice. The school allows the pupil a unit of credit for the work he does. If the pupil, after a year's experience in this work, finds he has chosen a work which he does not like or for which he is not fitted, he can take up some other line of work. The pupil is carefully assisted in mapping out a course of study adapted to his particular need in his vocation.

Rural Library System

How Henrico County, Virginia, set up a library system in the sixteen elementary rural schools through concentrated effort of teachers during a single school year is described by Supt. J. Milton Shue.

Each high school has a library under the direction of a trained librarian, but until this year elementary schools had classroom libraries only and too seldom was there an exchange of materials with other classes and teachers.

A full-time teacher was named by the principal of each elementary school to act as librarian; in return, she was relieved of other activities. A county council of teacher librarians was formed, and each classified the libraries by the Dewey Decimal System. Upper grade pupils were taught to serve as library assistants during different periods of the day.

Classes were assigned hours for library work and after getting atmosphere and learning how to use the library enjoyed freedom of use. Space for the library has been found in twelve of the sixteen schools by utilizing rooms previously used for storage, reception, clubs and office space. Shelves were installed and furniture purchased or improvised with the assistance of the county school board and with funds provided by the WPA and the P.-T.A.

At first buying centered on books, reference works, and encyclopedias; later books for pleasure reading were purchased.

FINANCE

Cut NYA Funds

Judging from the amount of funds released by the National Youth Administration for aid to pupils in secondary schools ($8,156,250), it is estimated that allocations for all phases of the student aid program will not exceed $20,000,000 for the coming year. This is against $28,139,000 spent in 1936-37 for the student program in colleges, universities and secondary schools. On the basis of average payments of $6 a month to each pupil, the limit permissible under the program, aid this year will be extended to about 151,000 secondary school pupils.

Cooperative Football Insurance

Competing football players of the Somerville High School at Somerville, N. J., this season have been assured of insurance protection through adoption of a cooperative plan being used in a number of other high schools throughout the country.

The plan protects any player who pays a fee of $2. The Somerville High School Boys' Athletic Association matches that amount for each player, the two sums then being combined into a separate fund. If a player is injured

Coming Meetings

Nov. 4-5—Arkansas Education Association.

Nov. 4-6—West Virginia Education Association, Clarksburg.

Nov. 4-6—Iowa State Teachers Association, Des Moines.

Nov. 5-6—Food Service Directors Conference, Boston.

Nov. 5-6—Kansas State Teachers Association, simultaneous meetings at Lawrence, Manhattan, Dodge City, Hays, Parsons and Wichita.

Nov. 11-12—National School Cafeteria Association, Chicago.

Nov. 12-13—Regional Conference, Progressive Education Association, Ann Arbor.

Nov. 12-13—Arizona Education Association, Tucson.

Nov. 12-15—New Jersey State Teachers' Association, Atlantic City.

Nov. 14-17—Association of Land Grant Colleges and Universities, Willard Hotel, Washington, D. C.

Nov. 17-20—Missouri State Teachers Association, St. Louis.

Nov. 18-19—Delaware State Education Association, Wilmington.

Nov. 19-20—Louisiana Teachers Association, Shreveport.

Nov. 19-20—Regional Conference, Progressive Education Association, Philadelphia.

Nov. 21-24—South Dakota Education Association, Sioux Falls.

Nov. 22-23—New York State Education Association, house of delegates, Jamestown.

November (Thanksgiving Week)—Virginia Education Association, Richmond.

Nov. 25-27—National Council of Teachers of English, Buffalo, N. Y.

Nov. 25-27—Texas State Teachers Association, Houston.

Nov. 26-27—Idaho Education Association.

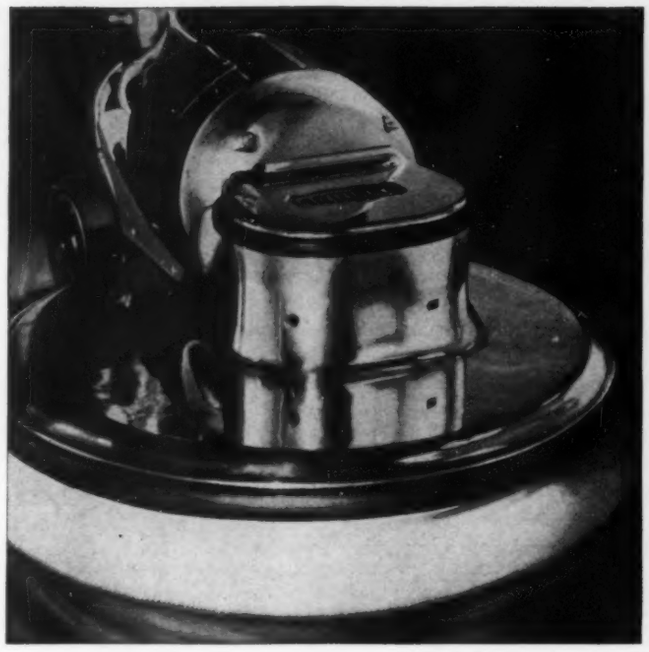
Nov. 29-Dec. 1—National Conference on Educational Broadcasting, Chicago.

Dec. 2—Regional Conference, Progressive Education Association, Springfield, Mo.

Dec. 3-4—Regional Conference, Progressive Education Association, Tulsa.

Feb. 26-Mar. 3—American Association of School Administrators, Atlantic City, N. J.

June 26-30—National Education Association, New York City.



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"FLOOR TROUBLE"

Have you a case of "floor trouble"? An oil soaked floor that you want to refinish; a beautiful linoleum floor you wish to protect and preserve? Do you want to know how to protect gym floor from scars, scratches, rubber burns; how to keep a terrazzo corridor clean under all-day traffic? Let a Finnell man diagnose the problem. More than likely he knows the answer already. Back of him is our one-third of a century of specialized experience, the complete Finnell line of machines,—large, small and in-between; Finnell waxes, fillers, soaps,—each designed to do a specific job. No charge for consultation. No obligation to buy. Address FINNELL SYSTEM, INC., 211 East Street, Elkhart, Indiana.

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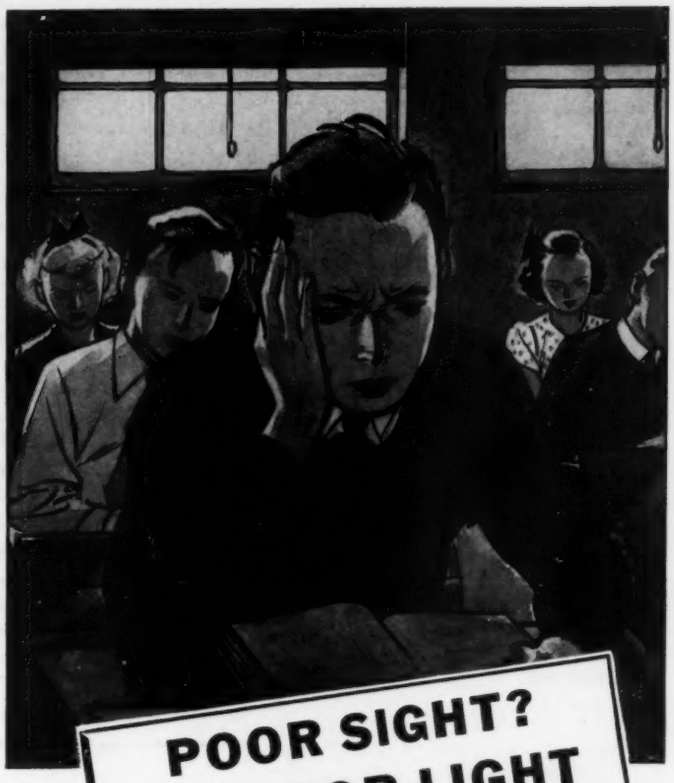

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TESTS PROVE "TONTINE"* SHADES ADMIT 75 TO 140% MORE LIGHT

TWO THINGS cause eyestrain in the classroom: Not enough light and too much glare.

"Tontine" window shades are specifically designed to overcome these conditions. Scientifically made to admit light without glare, these translucent shades give young eyes the protection they need.

Between frequent outside disturbances and excessive morning sunlight, schoolroom shades are drawn a good part of the time. Opaque shades put a strain upon students' eyes by shutting out needed light. Not so with "Tontine" shades. They admit light at *all* times—and soften the glare.

Two other features make these "Tontine" shades a truly economical purchase: They're washable, and they're extremely durable. Throughout years of service, periodic scrubbings with soap and water will keep "Tontine" shades looking as clean and fresh as new. Write us today for samples and complete information about "Tontine" shades.

**"Tontine" is du Pont's trade mark for its pyroxylin impregnated washable window shade cloth.*

Laboratory tests of translucency reveal: "Tontine" No. 500 Snow White transmits 73% more light than a similar color in painted cloth. "Tontine" No. 508 After Glow Gray Green transmits 140% more light than a similar color in painted cloth.

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* "Tontine" pyroxylin impregnated window shade cloth is a companion product to "Fabrikoid" and PX cloth, the rugged, long-lasting bindings for text books.

in any way during the course of the season, the player's parents are instructed to send the bill for treatment to school authorities. If there is enough money in the fund to cover the total cost of care, these bills will be paid in full. If there is not enough money to cover the charges, each player will receive a proportionate sum.

Principal Frank H. Lewis commented favorably on the probable success of the system.

ADMINISTRATION

Chicago Fights Vandalism

To stamp out acts of vandals who caused nearly $350,000 in damage to Chicago school buildings and property last year, James B. McCahey, president of the board of education, has announced a campaign among school officials, pupils and police to stop vandalism. The most disastrous acts, Mr. McCahey said, were the malicious breaking of 29,356 school building windows, which were replaced at a cost of $175,000. Burglaries and thefts accounted for most of the other property loss.

Classroom for Atypical Cases

Two new features are being added this year to the Albany school program, Albany, Ore., according to Frank B. Bennett, superintendent. The first is a classroom for atypical cases, which is being developed under a new law which provides for cooperation from the state medical school. The other is the new emphasis which is being given to the music program.

Denounces Propaganda

In his inaugural address as president of Muhlenberg College, on October 4, Dr. Levering Tyson dedicated himself to the task of equipping Muhlenberg graduates to meet the "onslaughts of the propaganda machines." Doctor Tyson has been director of the National Advisory Council of Radio in Education for almost a decade and has written numerous books and articles on the subject of radio in education.

Upholds N. J. Flag Law

The constitutionality of the 1932 New Jersey statute requiring all public school pupils to salute and pledge allegiance to the United States Flag was upheld recently by the Court of Errors and Appeals, which declared that the wisdom of the law was the concern of the legislature.

The state's highest court upheld the state supreme court's refusal to grant a review of the dismissal from school of two elementary school pupils, whose parents were members of a religious sect, and brought action on the ground that the law was an infringement of religious freedom.

The children were expelled from school because they refused to salute the flag on religious grounds and later their parents were fined for keeping them out of school.

Contest Return of WPA Funds

Contesting the government's action to obtain return of $24,000 of WPA funds obtained for construction of a vocational school building at Ellisville, Miss., school officials contend that pupils are being taught a trade while earning part of their school expenses. The school building is now in the hands of a silk hosiery manufacturer, with pupils doing the work under vocational instructors.

ANNIVERSARIES

Coeducation Centenary

Even surpassing in significance Oberlin College's centenary of existence, observed in 1933, was the institution's commemoration on October 8 of its contribution to coeducation one hundred years ago.

This was the sentiment Ernest H. Wilkins, president of the college which began the coeducational movement in 1837, expressed to Kathleen McLaughlin, *New York Times* staff writer, covering the event.

The festivities focused on dedication of a memorial and allegorical gateway, symbolizing the entrance of women into college work formerly open only to men.

BUILDINGS

Latest in Portables

As an experiment toward solving the school housing problem of Berkeley, Calif., caused by shifting centers of population, the school board has authorized construction of a portable classroom unit, estimated to cost approximately $4,000.

Far different from the usual "portable" or temporary bungalow, the new building will be of permanent construction, especially designed to permit easy moving from one location to another.

The portable unit will have a steel frame and the walls and roof will be of fire resistant material. Special attention has been given to lighting, heating and other conveniences. The room will be approximately 24 by 36 feet in size and will accommodate a maximum of forty pupils. As modern as it can be made the new unit, it is hoped, will provide a solution to the ever recurrent problems occasioned by fluctuation in school enrollment.

Boston Schools Benefit

Out of a total sum of $1,348,086 allocated to the city of Boston by the WPA, the city's school buildings will be benefited. The public school projects call for the modernization and improvement of 303 of the 324 public school buildings and 49 portables. Of this allotment $757,755 is for such improvements as resurfacing school yards and mending roofs and gutters.

Construct Vocational School

Contracts totaling $453,311 have been awarded for the construction of the new vocational school in Wilmington, Del., which is to be completed by September 1 of next year. The school will house 19 classrooms and laboratories, 12 shops, a library, cafeteria, gymnasium and auditorium, and will accommodate 850 pupils. Among the subjects to be taught in the new school are machine shop work, printing, electrical work, painting and decorating, general metal work and plumbing, automobile mechanics, welding, brass work, carpentry, mechanical drawing, commercial art, industrial chemistry and merchandising.

Penn State's Program

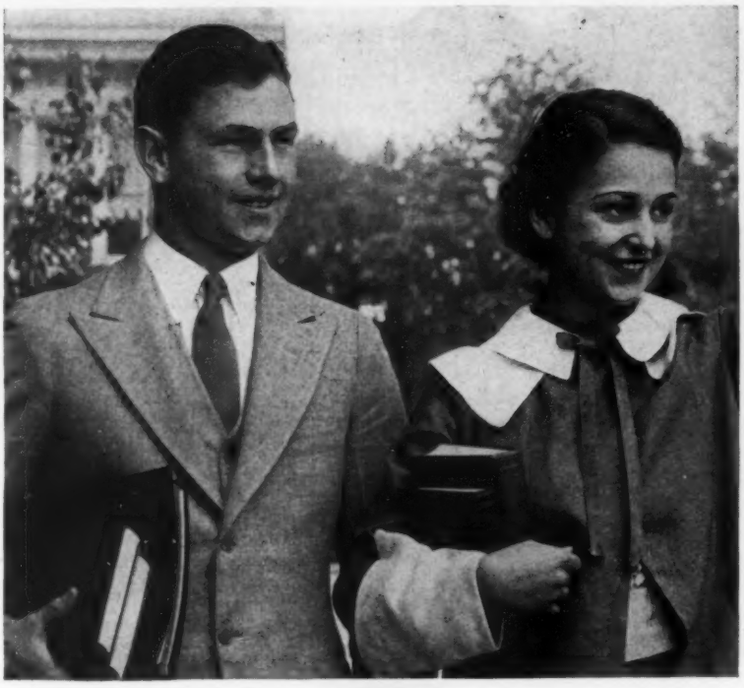
A building program to cost $6,500,000, which it is planned to complete in two years, has been undertaken by the Pennsylvania State College. The program involves fifteen projects, thirteen of which will be financed by the General State Authority with funds received from the Public Works Administration. Nine major buildings or additions to major buildings will be completed under its terms.

Virginia's WPA Total

WPA spending for school construction, repair and improvement in Virginia from the beginning of the works program in 1935 to August 17, 1937, totaled $1,237,298.71, it has been reported by the state administrator for the WPA.

Take Care of Their Own

Construction of six new dwelling units as an addition to the Southern California Teachers' Home, Pasadena, has been started in anticipation of increased need for enlarged facilities next year when a provision of the school code will go into effect by which teachers at the age of sixty-five automatically will be retired.



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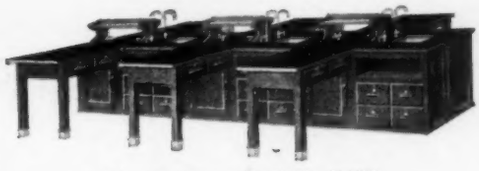

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Each unit will consist of living room, bedroom and bath. Occupants will take their meals at the home building next door. Ultimate development of the addition contemplates provision for fourteen additional dwelling units. Two will be single dwellings and six will be two-unit dwellings.

Maintenance of the home and addition are financed by annual $1 contributions of Southern California teachers. Construction costs are financed out of an endowment fund built up by bequests and special contributions from Parent-Teacher groups, teachers and other friends.

Stain Believed Fire Origin

Spontaneous combustion, resulting from staining of floors in the Dubach High School building, ten miles north of Ruston, La., the day before, was advanced as the origin of the fire by the chief who answered the call. The fire was discovered during the early morning hours by a passer-by, who summoned the Ruston fire department. The loss, estimated at $85,000, was covered by insurance. The two-story brick building was comparatively new. Authorities are investigating into the origin of the fire. The new $100,000 elementary grade school annex adjoining the high school building and divided by a fire wall, was saved by the fire department.

Tenting Days Nearly Over

Erection of a new elementary school building in Santa Barbara, Calif., will house pupils who have been attending school in tents for the second consecutive year. The long condemned school building will be razed.

To Serve 22 Districts

A new central school at Holland Patent, N. Y., will serve twenty-two school districts in Oneida and Herkimer Counties. The building will house the first six grades of grammar school, including a new kindergarten department, junior and senior high schools and home-making and agricultural departments. The architecture is Georgian colonial style, of mosaic brick with limestone trim.

Each grade classroom is equipped with movable desks, a wardrobe section for pupils, a clothes closet for the teacher, a book case and storage closet. Every room is wired for radio. The kindergarten room is one of the most attractive. The floor is of linoleum with inlaid nursery figures. A miniature stage has indirect lighting. The fireplace has an electric log and is flanked on both sides with bookcases.

The cafeteria is equipped with electric ranges, dishwashers, refrigerators and steam tables. The domestic science room has two electric ranges, a kerosene range and a prepared-gas range. Cabinets, tables and other equipment will facilitate instruction in all branches of domestic science.

Nearly all classroom floors are laid by the wood block method. Floors in halls are of terrazzo, and walls are wainscoted with vitreous tile. The floor in the auditorium is of mastic tile for quiet.

The auditorium has 569 permanent seats and is equipped for sound motion picture projection. The lighting for the stage and footlights is of standard theater type.

The gymnasium, 70 by 56 feet, can be divided by an electrically operated partition which runs from floor to ceiling. The floor is specially finished and is identical with that in Madison Square Garden. Gang type showers are installed in the boys' shower room and gang and individual showers in the girls' room. Offices of men and women physical instructors just off the gymnasium are each equipped with shower and toilet facilities. There are offices and waiting rooms for school nurses and doctors for health examinations and clinics.

The agriculture department is so equipped that large farm machinery can be brought in for study.

HEALTH

Fights Quack Speech Schools

Dr. Max A. Goldstein, a pioneer in training the deaf to speak and to read lips instead of using the sign language and the head of the Central Institute for the Deaf in St. Louis, recently expressed hope that an educational program to combat speech deficiencies will encourage the use of scientific methods and take sufferers away from quack schools. Doctor Goldstein addressed a recent joint meeting of the American Speech Correction Association, of which he is president, and the American Academy of Ophthalmology and Otolaryngology. The meeting was in Chicago.

Rural Pupils Benefit

Each pupil in the Independent School District, Madison, S. D., is to be given a physical examination this fall provided his parents give their consent. Additional examinations will be conducted during the year for those who need further physical check-ups.

The school health program is limited to examinations only. The physician and nurse completed the first general examination during the first month of the school year. Parents were notified in cases in which medical attention seemed to be needed, and all such cases were referred to the family physician.

A physician is assigned to each school. Parents may have some other physician give the examination if they desire.

Health on a 24-Hour Basis

Instruction in best methods of improving the health, growth and development of the whole child during his twenty-four-hour day are being emphasized at school health conferences of New York City school principals this year. These conferences, one during the fall term and one during the spring, are conducted by Dr. I. H. Goldberger, assistant director of health education.

GIFTS

Subsidizes Foundation

The will of Edward A. Filene, Boston merchant and philanthropist, filed recently, gave the greater part of an estate exceeding $2,000,000 to the "Good Will Fund," a recently incorporated charitable and educational foundation. Filene, who died recently in Paris, previously had placed the bulk of his fortune in trust for the Twentieth Century Fund, a foundation he organized in 1919. Securities set aside were valued at between $4,500,000 and $5,000,000.

In Honor of Doctor Kilpatrick

Honoring Dr. William Heard Kilpatrick, retired professor of education at Teachers College, Columbia University, a campaign to establish a fund of $100,000 is being sponsored by the alumni association of the college, the student council and former students. The Progressive Education Association is cooperating in the campaign. Part of the fund will be used to present a portrait of Doctor Kilpatrick to Teachers College, and the remainder to "carry forward the work in which he has an interest."

COURT DECISIONS

Married Teacher Wins

That school boards have no right to discriminate against married women teachers as to salary has been ruled by the Indiana Supreme Court in a case involving the appeal of Mrs. Mary Gill, a teacher at Michigan City. Mrs. Gill went to court over a difference in her salary as a married teacher and the higher amount she would have received had she not been married. She won in the county circuit court, the school board appealing to the state appellate

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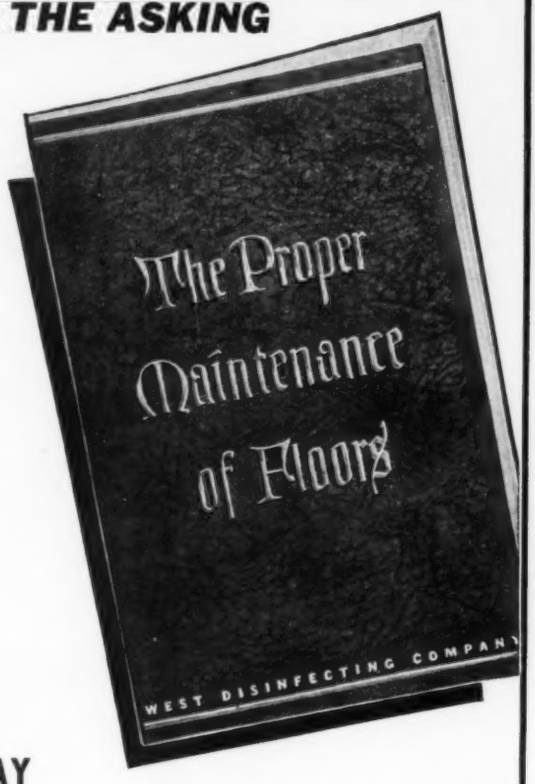

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Users will testify that the Vulcan Radial Fin Top range reduces the amount of gas needed for top stove cooking 20% or more; its insulated heat controlled oven reduces gas consumption 25 to 50%.

Due to greater speed and capacity, fewer units are needed, reducing investment. Refrigeration costs drop because insulated ovens reduce kitchen temperature; up-keep costs are lowered. Vulcan equipment actually pays for itself in savings made.

Foods are cooked better because heat of range top and oven can be automatically regulated. In a test, meat shrinkage was reduced 62 2-3%, resulting in more servings per roast. The new Vulcan Ceramic Broiler broils 35% faster and uses less gas. New Vulcan automatic deep fat fryers produce more healthful fried foods, and soon pay for themselves in fat, fuel and food saved.

Vulcan manufactures a large line of gas cooking equipment, including gas ranges in four sizes and 30 cooking tops, ceramic broilers, deep fat fryers, insulated heat controlled bake ovens and roasting ovens, boiling, waffle and griddle stoves, hot plates, industrial and urn burners, etc. ASK FOR CATALOG, "Cutting Cooking Costs."

Schools and Colleges have specified VULCAN *for 50 years. Here are a few out of Hundreds of installations:*

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CORNELL UNIVERSITY	Ithaca, New York
COLUMBIA UNIVERSITY	New York, New York
U. S. MILITARY ACADEMY	West Point, New York
STATE TEACHERS COLLEGE	Yankton, South Dakota
PUBLIC SCHOOLS	Birmingham, Alabama
ALEXANDER HAMILTON HIGH SCHOOL	Los Angeles, California
LINCOLN HIGH SCHOOL	Des Moines, Iowa
LOUISIANA STATE UNIVERSITY	Baton Rouge, Louisiana

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court. The appellate court transferred the case to the supreme court, recommending that it reverse its stand in a previous decision that school boards may make their own rules about married teachers, even to the point of dismissal for being married. The previous case involved no salary discussion. The supreme court upheld Mrs. Gill, but did not reverse its other ruling, indicating that the two cases had no relation.

RADIO

Vice President Benton

William E. Benton, former partner in an advertising agency that occupied a leading place in radio advertising, has assumed his new duties as vice president of the University of Chicago. Mr. Benton is expected to bring to the school a new interest in the possibilities of the radio and the motion picture as adjuncts to education.

"The next ten years will see a development in adult education by radio, with the universities taking a leading part in this field," Mr. Benton states. "Also, it is a prophecy of leading educators that in the future motion pictures will be as important and will be used as extensively as textbooks were originally."

He lauded the University of Chicago for its Round Table program on Sunday mornings, saying his agency's house-to-house canvass of Middle-Western towns last year showed that 20 per cent of all radio listeners were familiar with the program.

Its popularity is about fifty times that of any other program developed and produced by a university, according to Mr. Benton. He believes the University of Chicago is, and should be, years ahead of others in educational broadcasts. It has had six years' experience, it is located in one of the nation's three broadcasting centers and its faculty is nationally recognized."

Dramatizing Latin America

Secretary of the Interior Harold L. Ickes has announced the beginning on November 1 of a vast educational program through radio, backed by the federal government, to further the Good Neighbor Policy of this country with Latin America. The series entitled, "Brave New World," will be presented each Monday from 10:30 to 11:00 p.m. (EST) over the CBS network in twenty-six episodes.

The series will be woven around the life stories of the great leaders, statesmen, educators, poets and artists of Latin America, from the days of the Conquistadores to the present. Dr. Samuel Guy Inman, an adviser to the U. S. delegation at the Buenos Aires conference, is acting as technical adviser in the development of the series. Doctor Inman is executive secretary of the committee on cooperation in Latin America.

"This will probably be the first time in history," John W. Studebaker, commissioner of education, said, "that one government has spent time and money on a sustained effort to help its own citizens appreciate the ideals of peoples across the border. While war and talk of war are darkening the horizon, it is heartening that the Americas are working for peace."

North Star School

Mrs. Marion E. Faegre of the Institute for Child Welfare, University of Minnesota, this year is conducting the North Star School, a series of weekly broadcasts sponsored by the radio committee of the Minnesota Education Association. Mrs. Faegre's discussions deal with child problems in which both home and school are interested. One broadcast each month will be devoted entirely to music, to be supplied by various city schools. For the second half of the year's broadcasts, a series covering the choice of occupation and the choice of high school subjects in relation to occupation and college is planned.

Youth Is Theme

"Youth in a Modern Community" is the theme of the Parent-Teacher Radio Forum being presented over the Blue network of the National Broadcasting Company each Wednesday afternoon from 4:30 to 5:00 o'clock (EST). The series will continue through April 13, 1938.

PUBLICATIONS

Resume Bulletin Publication

To inform teachers of geographic changes constantly going on in all parts of the world, the National Geographic Society has resumed publication of its weekly bulletin for teachers, the *Geographic News Bulletin*. The publication will be issued for thirty weeks. The subscription price is 25 cents to cover mailing costs and should be sent to the National Geographic Society, Washington, D. C.

New Junior High Magazine

Junior Scholastic, a weekly magazine for junior high and upper grade school classrooms, published by the editors of *Scholastic*, the high school weekly, made its first appearance in September. Its stated objectives are to provide each week a complete reading program related to class subjects, one of the best short stories ever written for children and enough quality children's literature to enliven class hours and enrich leisure. The magazine is illustrated with photographs portraying current events, geography, the workaday world and industry.

Replaces "Student Leader"

Student Life, which takes over *Student Leader*, published by the National Education Association, made its bow in October. The new publication is expanded to serve as an organ of the National Association of Student Officers and of the National Honor Society, as well as to cover the aspects of student life in the secondary schools.

The Department of Secondary-School Principals also has announced that its bulletin, formerly published five times a year, will now appear eight times a year, from October to May. The bulletin will add features about projects of the association's discussion group bureau and news notes.

Six-Man Football

Stephen Epler, who invented six-man football, a new and increasingly popular game for small high schools and intramural programs, has written an official handbook, which may be secured from the sports editor of the *American Boy* magazine.

Surveys Building Problems

"Functional Planning of Elementary School Buildings," a bulletin just issued, is the result of extensive research study on school building problems conducted by the U. S. Office of Education in cooperation with the National Advisory Council on School Building Problems. The publication may be obtained from the superintendent of documents of the Government Printing Office, Washington, D. C. Single copies are 25 cents, and a 25 per cent reduction is given on orders of 100 copies or more.

NAMES IN NEWS

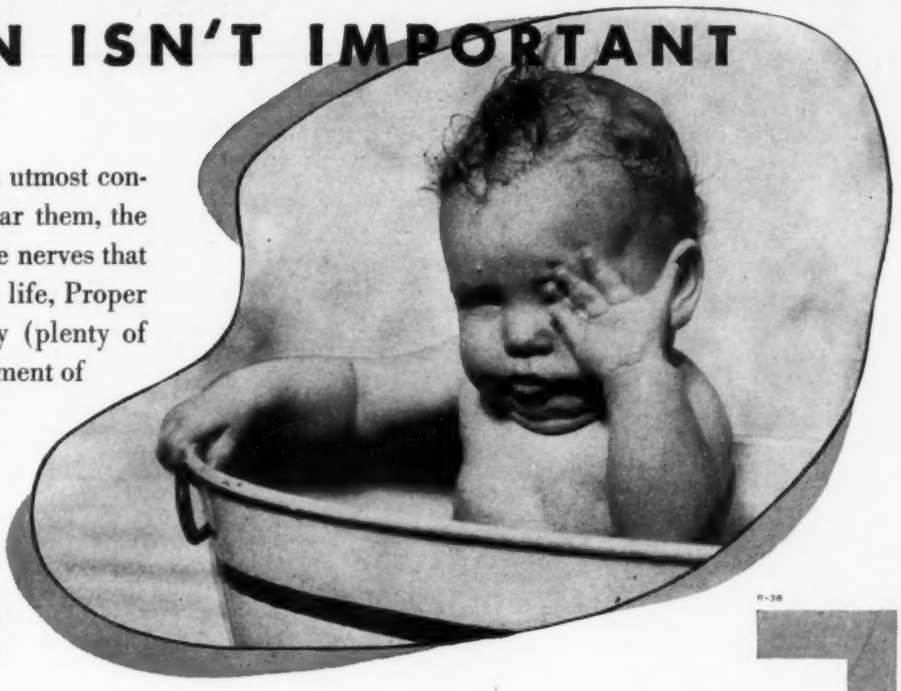
City Superintendents

EMERSON H. LANDIS has become superintendent of schools at Dayton, Ohio, succeeding CLAUDE V. COURTER, who resigned to accept the superintendency of the Cincinnati public school system.

ROY W. WILEY succeeds JOHN A. GIBSON, retired, as superintendent of schools at Butler, Pa.

PLINY H. POWERS, forty-two-year-old

THERE'S NEVER A TIME WHEN A PERSON ISN'T IMPORTANT



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first assistant superintendent of schools at Cleveland, is the new superintendent of schools at Youngstown, Ohio. Mr. Powers has been given a five-year contract. He replaces GEORGE E. ROUDEBUSH, appointed superintendent of schools at Columbus, Ohio. Mr. Powers is president of the Ohio High School Principals' Association and past-president of the Cleveland Schoolmasters' Club.

MELVIN NOE recently assumed the superintendency of the public schools at Odin, Ill.

DR. PARKE H. SCHOCH, associate superintendent of schools, Philadelphia, has announced his resignation. Doctor Schoch is sixty-eight. The retirement age under the state retirement act is sixty-five, and the compulsory retirement age is seventy.

GEORGE C. WRIGHT is the new superintendent of the Towanda schools near Bloomington, Ill., which again have been reaffiliated with the Illinois State Normal University. Mr. Wright is a former superintendent of schools at Braddock, N. D., and principal of the junior high school at Blue Island, Ill.

R. A. BAUM, for the last eleven years superintendent of the Oil City school district, Oil City, Pa., has resigned, the resignation to become effective on November 1.

B. E. GUM is the new superintendent of schools at Salem, Ill., succeeding CLYDE M. CAMPBELL, who has accepted a position as high school visitor for the University of Illinois. Mr. Gum has been principal of schools at Odin, Ill., for the last seventeen years.

PHILIP FALK is the acting superintendent of schools at Madison, Wis., for the first semester, replacing R. W. BARDWELL, who has taken leave of absence to work toward a master's degree. In February Mr. Falk will become superintendent of schools in Waukesha, Wis.

O. W. FUNKHOUSER, former superintendent of schools at Hume, Ill., is the new principal of the high school at Amboy, Ill.

On the Air During November

The following programs of particular interest to school people are arranged by the National Broadcasting Company and the Columbia Broadcasting System. The time is Eastern Standard.

Daily

National Farm and Home Hour[1]—1:30-2:30 p.m. (NBC Blue).

American School of the Air,[2] ninth season, runs until May 6—2:30 to 3:00 p.m., (CBS). On Mondays "Exits and Entrances" will be heard; Tuesdays, literature and music; Wednesdays, geography; Thursdays, songs and folk tales, and Fridays, vocational guidance.

Monday

Explorers' Series, sponsored by the American Museum of Natural History — 6:15-6:30 p.m. (CBS).

All America, dramatizations of American history, U. S. Office of Education—10:30-11:00 p.m. (CBS).

"Brave New World," Latin-American program, sponsored by U. S. Office of Education — 10:30-11:00 p.m. (CBS).

Tuesday

Fun in Music, band lessons under direction of Dr. Joseph Maddy—2:00-2:30 p.m. (NBC Red).

NBC Music Guild, unusual compositions of great composers; guest artists—2:30-3:00 p.m. (Blue).

Stories of Industry, sponsored by the U. S. Department of Commerce—4:30-5:00 p.m. (CBS).

Science Service Series, dramatizing and explaining latest scientific developments—5:15-5:30 p.m. (CBS).

"Drama of the Skies," the Hayden Planetarium program on astronomy for juveniles and adults — 5:30-5:45 p.m. (CBS).

Wednesday

Current Questions Before the House, each week a different member of the House of Representatives discusses a current problem—3:30-3:45 p.m. (CBS).

Youth in a Modern Community, sponsored by the radio forum, National Congress of Parents and Teachers — 4:30-5:00 p.m. (NBC Blue).

U. S. Cabinet Series, presenting a different member of the President's cabinet each week—10:30-11:00 p.m. (CBS).

[1]Except Sunday.
[2]Monday through Friday.

Your Health, supplementary material for health teaching in junior and senior high schools, sponsored by the American Medical Association—2:00-2:30 p.m. (NBC).
November 3—Striving for Better Bodies.
November 17—Fresh Air, Fresh Clothes and Fresh Skin.
November 24—Rest, Relaxation, Refreshment.
December 1—Tuberculosis, Foe of Youth.

Our American Schools, sponsored by the N. E. A. to promote teacher welfare and better support for schools — 6:00-6:15 p.m. (NBC Red).

Thursday

Education for Living, sponsored by the General Federation of Women's Clubs — 4:30-5:00 p.m. (NBC Blue).

Current Questions Before the Senate, a member of the Senate is heard each week discussing a current problem—5:00-5:15 p.m. (CBS).

Friday

NBC Radio Guild, revivals of plays, new and old, that have had general acceptance—3:00-4:00 p.m. (Blue).

Education in the News, dramatization of news items in education by the U. S. Office of Education—6:00-6:15 p.m. (NBC Red).

Saturday

Our American Schools, sponsored by the N. E. A. to bring home and school in closer cooperation — 11:00-11:15 a.m. (NBC Red).

Cincinnati Conservatory of Music, symphonic and small instrumental recitals of classical and contemporary music — 11:00 a.m.-12:00 noon (CBS).

NBC Concert Hour—8:45-9:30 p.m. (Red).

Sunday

University of Chicago Round Table Discussions—12:30-1:00 p.m. (NBC Red).

New York Philharmonic Symphony Society, with John Barbirolli conducting — 3:00-5:00 p.m. (CBS).

The World Is Yours, thrilling adventures in the world of science by the Smithsonian Institution—4:30-5:00 p.m. (NBC Red).

Third Intercontinental Concert, October 24—11:00-11:30 a.m. (NBC Blue).

Principals

W. J. GOREHAM, who has been principal of the Sidell Township High School, Danville, Ill., for eleven years, has been appointed to membership on a committee to study and plan a modern and workable curriculum in health and physical education for Illinois schools.

WILLIAM COFFMAN, who has taught in the high school at Flemington, N. J., for the last nine years, has been elected principal of the high school at Millville, Pa.

WILLIAM J. BARRY, MARY F. THORNTON, MARY C. CULHANE, FRANCIS A. KELLY, BURTON L. CUSHING and M. GERTRUDE GOULD are the six new principals of the Boston public evening schools.

DR. ERNEST J. BECKER, who has been principal of the Western High School, Baltimore, for sixteen years, and a schoolman for nearly forty, retired on October 1.

WILLIAM J. HAGENY has replaced W. FRANK MARKLE as supervising principal at Haldane Central School, Cold Spring, N. Y. Mr. Hageny formerly was vice principal and guidance director at Haldane.

WILBUR S. YOUNG, for thirteen years superintendent of schools at Springfield, Tenn., has been elected principal of the Highland Heights Junior High School, Nashville, Tenn. Mr. Young succeeds HORACE S. LIPSCOMB, now principal of the East Nashville Junior High School.

JOHN P. FLEMING, former master of the Bruce Grammar School, Lawrence, Mass., was chosen principal of the Lawrence Evening High School recently after twenty-one ballots, in addition to twenty-five taken at a previous meeting of the school committee.

JOHN GUY has been named principal of the Fountain High School, Greenville, N. C., succeeding H. B. MAYO, who resigned to accept a principalship in Lucama School, Wilson County, North Carolina.

A. R. CLIFTON, superintendent of schools, Los Angeles County, California, has announced new county school principals for this school year. WALTER G. COOMBS is the new principal of the First Avenue School; O. KEITH WOOD, Ramona School; WILLIAM H. JOHNSON, LaVerne Heights School; WINTON C. SMITH, South Whittier; SAMUEL K. SOLLEDER, Palmdale Elementary School, succeeding MRS. JOYCE E. PAUL, and VERLIN SPENCER, South Pasadena Junior High School.

LUCY M. BAILEY, veteran teacher at Victory High School, Clarksburg, W. Va., was named acting principal of the school to succeed HENRY L. ASH,

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Gives better light . . . lower maintenance costs

Here's new help for the schoolboard, as well as for pupils and teachers. Because the Commodore not only provides lighting that helps guard eyesight from strain, it cuts maintenance costs and modernizes overnight.

Thanks to its scientific design, the Commodore provides 83% of the light from the bare bulb . . . soft, diffused light, free from glare.

Its featherweight molded shade helps pare down maintenance costs by assuring: 1. Less breakage; 2. increased safety; 3. easy cleaning.

And its bright, cheery light and attractive appearance foster greater cleanliness, respect for school property and thus, better citizenship.

FREE: An interesting 16-page booklet entitled "Recommendations for Classroom Lighting." Presents many important facts concerning classroom lighting . . . points out the danger to eyes of depending too much on window lighting . . . gives case histories on results secured with and without better classroom lighting . . . makes definite, helpful recommendations for securing lighting that helps guard eyesight and promotes better citizenship on the part of pupils.

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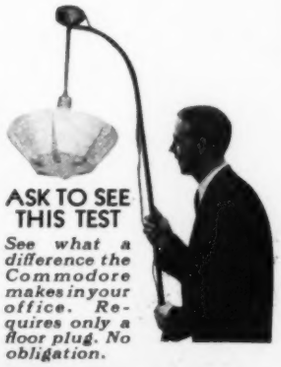

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Manufacturers of School, Theatre, Church, Auditorium, Stadium, and Transportation Seating

who resigned to accept the treasurership of Salem College.

P. T. WALTERS, principal of the Taylorville Township High School, Taylorville, Ill., will retire next spring.

DR. MARGARET V. KIELY, principal of the City Normal School, Bridgeport, Conn., has resigned to become dean of the new Queens College of New York.

RUSSELL LUDLUM has been appointed principal of schools at Chester, N. Y. Mr. Ludlum succeeds ROY W. EPTING, appointed to the principalship of the Warwick city schools, Warwick, N. Y.

REYBURN A. HIGGINS has been appointed acting principal for one year of West Side High School, Newark, N. J., succeeding ALAN JOHNSON.

C. ERNEST KINSEY, resigned supervising principal of Armagh-East Wheatfield Township Joint High School of Johnstown, Pa., has been elected to the faculty of Indiana State Teachers College, Indiana, Pa.

WALLACE H. WHITTLE has been appointed headmaster of the Weymouth High School, Weymouth, Mass., to succeed the late FREDERICK W. HILTON.

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That is the economic formula for modern vacuum cleaning. It is the reason why so many new schools are equipped with Spencer Vacuum Cleaning Systems, and why even the older and smaller schools are rapidly adopting Spencer Portable Cleaning.

Educators and Architects have proven that Spencer Vacuum gets more of the dirt and dust than other methods. Because the power and upkeep costs are very low, Spencer Cleaning is also a recognized instrument of economy.

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In the Colleges

JAMES P. BAXTER of Williams College, EDMUND E. DAY of Cornell University and CHARLES SEYMOUR of Yale University were officially inducted as presidents of their respective institutions on October 8.

DR. JOHN PRESTON MCCONNELL, for more than a quarter century president of the Radford State Teachers College, Radford, Va., has submitted his resignation as head of that institution and will retire, because of ill health, as soon as a successor is appointed. He is seventy-one years old.

V. D. PATTERSON, former superintendent of schools, Grinnell, Iowa, has become personnel manager at Grinnell College.

DR. LEWIS W. DOUGLAS, former director of the United States budget, will become principal of McGill University, Montreal, Que., on January 1. He succeeds A. E. MORGAN of England, who resigned in May. Although Doctor Douglas was born in Arizona, his father and grandfather came from Quebec. The latter once was a governor of McGill University and later became one of its benefactors.

G. DERWOOD BAKER, principal of the South Pasadena Junior High School, South Pasadena, Calif., for a number of years, has been made principal of the senior high school of the Lincoln School, Teachers College, Columbia University.

DR. WALTER L. WILKINS is the new dean of Springfield Junior College, Springfield, Ill., replacing DEAN AUGUSTINE CONFREY, who is now a member of the DePaul University faculty, Chicago. Doctor Wilkins formerly was on the faculty of Notre Dame University where he taught education and psychology.

MARY TUCKER THORP, a teacher at the Henry Barnard School in Providence, R. I., for a number of years, has been made head of the institution which is the training school for the Rhode Island College of Education.

DR. HARL ROY DOUGLASS of the University of Minnesota has joined the faculty of the consolidated University of North Carolina as head of the division of education. He replaces DR. MARION R. TRABUE, now dean of education, Pennsylvania State College.

DR. WILLARD E. HOTCHKISS, president of Armour Institute, Chicago, since 1933, has resigned to enter private business. HENRY T. HEALD, dean, was named acting president.

ELIZABETH BARNES is the new dean of women at the Asheville Normal and Teachers College, Asheville, N. C.

DR. WALTER H. RYLE, who has been connected with the social science department and also chairman of the bureau of placement for the Northeast Missouri State Teachers College, Kirksville, has

a.c.f. Fairhurst folding Walls

A.C.F. Fairhurst Folding Walls save space and time in modern schools and colleges. Shown is an installation in Smith College, Northampton, Mass., Ames and Dodge, Architects. A.C.F. Folding Walls move at a touch, harmonize with any type of architecture, automatically adjust for building settlement, floor or ceiling sag. No visible hardware. No bolts. May be finished in any surface—slate blackboards are practicable, since a spring jamb holds the units to a smooth, firm surface. When folded, may be concealed without the use of pocket doors, since the last door folded may serve as the closure for the recess.

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School executives and their architects are invited to make full use of our engineering and consultation staff—whether the problem is one of modernizing present food service facilities, planning a new installation or buying single pieces of cafeteria and kitchen equipment.

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Can They Practice What You Preach?

IN too many schools today, washing facilities are so inadequate —so generally uninviting—that there's little inducement for children to practice the hygienic habits preached to them in the classroom.

The logical way to stimulate a child's interest in keeping his hands clean is to make the task as pleasant as possible. And one of the most successful ways to accomplish this purpose is by installing Ivory Soap Dispensers.

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It's easy—it's pleasant—to wash face and hands with the Ivory Dispenser. The dispenser itself is exceptionally attractive with its gleaming chromium surfaces and its gracefully designed glass bowl which holds the flaked or granulated Ivory Soap.

And children go for Ivory Soap. They know that it is pure, gentle, rich lathering and rapid and thorough in its cleansing action.

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IVORY SOAP DISPENSERS

been elected president of the college.

DR. WALTER DEWEY COCKING, chief specialist in school administration for President Roosevelt's advisory committee on vocational education, and former professor of school administration at George Peabody College for Teachers, has become dean of the University of Georgia college of education.

DR. SAMUEL B. HECKMAN, founder and director of the educational clinic at the College of the City of New York since 1913, has been appointed head of the department of education.

DR. RALPH C. JENKINS, president of the State Normal School, Danbury, Conn., was installed recently as president of the State Teachers College, which takes its place, following a ceremony initiating the four-year course.

State Departments

R. J. MULLINS, for twelve years superintendent of schools at Tucumcari, N. M., resigned to become director of secondary education for the state of New Mexico. He succeeded CHARLES L. ROSE on the state department staff, who is now state supervisor of high schools.

JAMES H. BAILEY, superintendent of schools at Litchfield, Minn., has resigned to take charge of the teachers' placement bureau of the Minnesota department of education.

RAYMOND W. ROBINSON, who was superintendent of schools at DuBois, Pa., until his appointment a few months ago to the Pennsylvania department of public instruction, has been advanced in that department to the position of chief of the division of consolidation and transportation.

DR. A. H. COLLINS, head of the Alabama department of public welfare, has succeeded DR. J. A. KELLER, as state superintendent of education. Doctor Keller is the new president of Florence State Teachers College.

DICK SMITH, former superintendent of Brown County schools, Ohio, has been appointed assistant state director of education to succeed E. N. DIETRICH, who was elevated to the state directorship when E. L. BOWSHER became superintendent of the Toledo schools, succeeding DR. RALPH E. DUGDALE, who went to Portland, Ore.

Miscellaneous

JOSEPH H. SMITH, formerly an instructor at Culver Military Academy, has become associated with Rand, McNally & Company as one of its state representatives for Michigan.

MRS. FRANKLIN D. ROOSEVELT and LORD MARLEY, English statesman, will appear on the program of the Iowa State Teachers Association convention, November 4 to 6, at Des Moines.

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SCHOOL EQUIPMENT

STEEL WARDROBES

The "Lockerobe" for elementary schools. Pioneered by "Medart." Approved and installed by leading architects and school officials.

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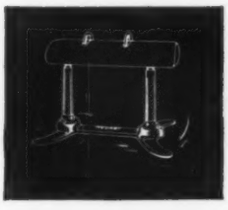

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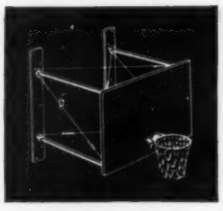

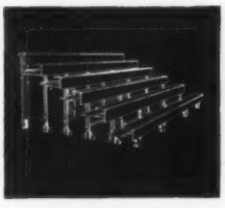

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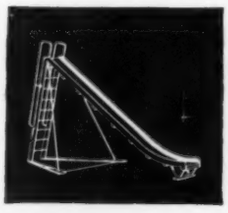

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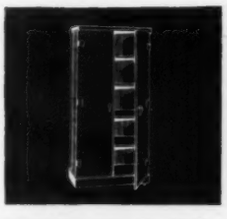

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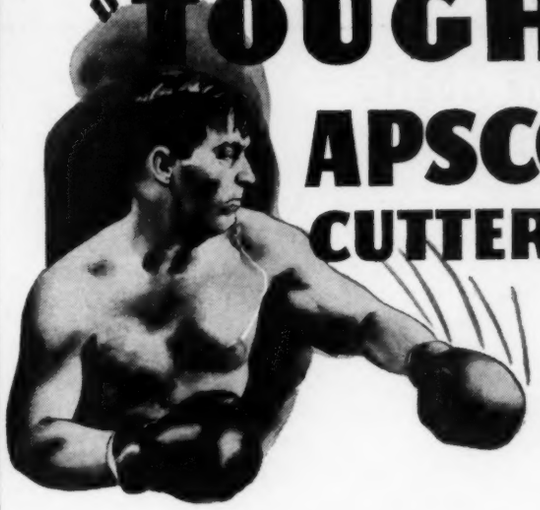
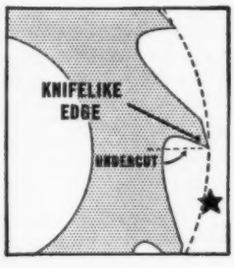


. . . "TOUGH" — to stand up under a battery of constant, hard usage!

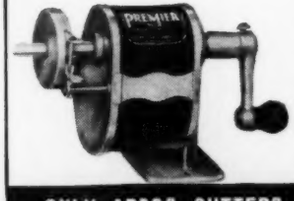
. . . "TOUGH" — for you to find any better than APSCO makes!

When experts designed and built APSCO CUTTERS — they made a champion . . . a swift, smooth-running *winner* with powerful C-U-T-T-I-N-G performance.



Here's why APSCO CUTTERS beat them all!

Notice the keen, knife-like edges! See the LOWER concave side of the "tooth" — extra roominess for shavings! Observe the UPPER side — a BEVEL that terminates in the C-U-T-T-I-N-G edges of APSCO CUTTERS!



You'll find it a "Tough" job to find any to equal APSCO CUTTERS! That's why 85% of the Schools throughout the United States have standardized on APSCO Automatic Pencil Sharpeners — the ONLY ones in which APSCO CUTTERS are used.

ONLY APSCO CUTTERS APPROACH THE IDEAL OF A KNIFE LIKE EDGE COMBINED WITH GREAT DURABILITY
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The advanced Universal has won the approval of users in every field. This ruggedly constructed projector embodies all latest features. Throws brilliant image to desired screen size. True tone quality. Amplification for large or small audiences. Compactly portable in carrying case. *Universal is low in first cost.* Economical upkeep.

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750-Watt projector lamp. Brilliant pictures. For all size reels. Heavy duty construction. Easy, simple operation. Trained operator not necessary. Adjustments quickly accessible. For sound or silent films. Full draft ventilation. Central oiling. Bausch & Lomb sound optical unit. Underwriter approved. Easy on film.

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Power for large or small groups. Phono or Microphone outlet. Tone-control. Volume control. Connection arranged so that error in operation is impossible.

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Dynamic Type. 12-inch cone. Special voice balance. 50 ft. voice line. Speaker in amplifier case for carrying.

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C. A. NICOLSON, custodian of the Rolfe Public School, Rolfe, Iowa, was badly burned while working at the school building. He was warming wax to continue waxing floors when the wax ignited.

Deaths

MELVIN E. HAGGERTY, dean of the University of Minnesota education department, died recently at the age of sixty-one in Minneapolis. He was president of the National Association of College Teachers and an authority on educational psychology. He had been a member of the university faculty for many years.

DR. WILLIAM EDWARD RAFFETY, acting president of the University of Redlands, died recently in the Redlands Community Hospital, as a result of injuries received in an automobile accident.

A. LOUIS GORDON, instructor in mathematics in the Detroit Eastern High School from 1910 to 1924, and instructor in Wayne University from 1933 to 1937, died recently.

MRS. ADELAIDE MCALPIN PYLE, founder of the educational work for the preschool child now carried on under the auspices of the Child Education Foundation of New York, died recently at the age of seventy-eight at Noroton, Conn.

D. J. MCAULEY, seventy years of age, superintendent of Houston County schools, Tennessee, for more than thirty years until he retired three years ago, died recently at his home in Erin, Tenn.

DWIGHT W. MCCOY, principal of the high school at Springfield, Ill., died recently in the Veterans Administration Facility, Hines, Ill. He was a World War veteran.

JOSEPHINE BARNABY, former principal of Shaw High School, Cleveland, Ohio, died while vacationing at Ocean Point, Me.

WALLACE C. BOYDEN, principal of Boston Teachers College for thirty years prior to his retirement in 1929, died recently at his home at Newtonville, Mass.

TRANSPORTATION

Retain Commercial Busses

When the new Union County Jonathan Dayton Regional High School in Springfield, N. J., opened its doors for the first time this fall, a number of bus companies had to be retained to transport pupils to and from the institution.

Replete with modern equipment, the school is said to be one of the finest of its type in the country. The high school serves six communities which have had no high school facilities in the past. It has an enrollment of 600 pupils.

W. Warren Halsey, Westfield, N. J., is supervising principal of the Regional School.

For Safe Excursions

When school principals in New York City plan an excursion for school children they must first ascertain from the state transit commission whether the operator of the bus or busses has complied with standard safety regulations. Assistant superintendents may not approve requests for permission to take classes on excursions involving the use of busses unless this regulation has been complied with.

VISUAL EDUCATION

Ohio's Scenic Beauties

B. A. Aughinbaugh, state director of visual instruction for Ohio, has prepared eight travelogues depicting the state's scenic beauties and places of historic interest. These motion pictures will be available to theaters only for some time to come. There is no propaganda in these travelogues, they are professionally made and are said to be the equal of any travelogues now on the screen.

Full-Length Color Cartoon

More than 1,600,000 sketches will figure in the first feature length color cartoon, "Snow White and the Seven Dwarfs," now in process of production at the Walt Disney Studios and due for release in December.

Progress Doubled

That silent motion pictures supplementing elementary history instruction double normal class progress has been concluded from tests conducted by Paul G. Hook, principal of schools at Clifton Forge, Va.

Two sections of 6B were divided into experimental and control groups for this experiment, the control group not having access to the pictures. One picture was shown each week to the experimental group over a period of four months, the usual method of teaching history being used at other times. Conditions were made as nearly equal as possible; two teachers, both with four years' experience and with college degrees, having charge of each section.

The film used was "The Chronicles of America Photoplays," made under auspices of the Yale University Press Film Service. This is a series of fifteen motion pictures, 16 mm. in width, presented in the following order: Columbus, Jamestown, Pilgrims, Eve of the Revolution, Gateway to the West, Puritans, Peter Stuyvesant, Wolfe and Mont-

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Now Built in Two-case and Single-case Models

● The new, improved Filmosound Model 138 sound-on-film projectors now offer added features particularly appreciated by educators:

(1) Reverse, to permit running the film backward to repeat a scene.

(2) Clutch, for still projection for prolonged study of a single film frame.

(3) Silent (16) as well as sound (24) film speed.

Where the projector is to be used in the schoolroom with the audience, rather than in a booth, the new two-case model (pictured) is ideal. The blimp case which houses projector and amplifier effectively silences the projector mechanism.

Qualities which have made Filmosounds the choice of most industrial 16 mm. sound film users . . . their choice after exhaustive comparative tests in thoroughly equipped laboratories . . . recommend Filmosounds as best meeting schools' requirements. In picture quality, in sound reproduction, in ease of operation and of maintenance, in film protection, and in lasting dependability, you'll get the most for your money in a Filmosound. Mail the coupon for complete information.

"NEW HORIZONS," a recently published booklet, will familiarize you thoroughly with the new teaching tool, the educational motion picture . . . with its nature, its applications, its values, the technique of using it effectively, and the experiences of educators who are using it. Send the coupon for your free copy. Bell & Howell Company, Chicago, New York, Hollywood, London. *Est. 1907.*

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calm, Declaration of Independence, Yorktown, Vincennes, Daniel Boone, Frontier Woman, Alexander Hamilton and Dixie.

While the experimental group made twice normal progress, the control group made slightly less than normal progress, the average increased score of the experimental group being double that of the control group.

Uncle Sam as Producer

The Bureau of Mines, U. S. Department of the Interior, offers to the schools and colleges, as well as other groups, a growing library of new sound and silent motion pictures. These films are available in 35 and 16-mm. sizes.

To encourage the establishment of centers throughout the country for the production of visual aids for school use, the WPA offers assistance to representatives of local school systems who may be interested in having such centers established in their areas. Frank A. March, WPA, Walker-Johnson Building, Washington, D. C., is in charge of this service.

"Rollin' Down to Mexico"

A new motion picture film, "Rollin' Down to Mexico," has been added to the Pan-American Union's motion picture library as a part of its educational activity. The film library subjects deal with the countries, cities and commodities of Latin America. Other subjects placed in the motion picture loan service of the Union include a film on the arts and crafts of Mexico, showing native handiwork; the petroleum industry of Mexico, and the story of bananas.

Automobile Engines

A two-reel silent film in both 16 and 35-mm. sizes is available through the Pittsburgh Experiment Station, U. S. Bureau of Mines, for transportation costs only. Entitled "Making of V-Type Automobile Engines," the film opens with the arrival and unloading of an ore boat and the storage of the iron ore. These scenes are followed by others showing the charging and tapping of the blast furnaces, the handling of molten iron, charging electric furnaces, adding alloys, building molds and casting molten metal. Finally, the engine is put together on the assembly lines, tested and placed in the chassis of an automobile.

TVA Films Norris Dam

A picture showing in detail the construction of Norris Dam is now being distributed by the U. S. Department of Agriculture, division of motion pictures, for the Tennessee Valley Authority. The film is three reels in length, is silent and is available in 16 and 35-mm. sizes.

Films for the School Screen

Biology V—Reptiles

Reptiles—Harmless garter snakes, pit vipers and poisonous coral snakes; New World lizards—American "chameleon," horned "toad," iguana, and Gila monster; alligators—their habits, eggs and young; tortoises and turtles—box tortoise, desert tortoise and marine turtles. 1 reel. 16 mm., silent. For rent or for purchase. Eastman Kodak Company, Teaching Films Division, Rochester, N. Y.

Fangs of Death Valley—Reptiles and scorpions. 2 reels. 16 mm., sound. For rent. Ideal Pictures Corporation, 28 East Eighth Street, Chicago.

Frog—The frog is shown as the most representative amphibian; entire life cycle is presented, aided by many stop-motion and microscopic views; the development of the embryo and the changes taking place in the tadpole stage; slow-motion photography of jumping and tongue action. 1 reel. 16 mm., sound. An Erpi film. For rent. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

Serpents and Lizards—Dangerous snakes of the United States; the cobra and its enemy, the mongoose; harmless serpents, by Dr. Raymond L. Ditmars. 1 reel. 16 mm., silent. For rent. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

The Chameleon—This member of the lizard family demonstrates its ability to catch insects at long range. 1 reel. 16 mm., silent. For rent or for purchase. Bell and Howell Company, 1801 Larchmont Avenue, Chicago.

Romance in the Pond—Life of the newt. 1 reel. 16 mm., sound. For rent or for purchase. Walter O. Gutlohn, Inc., 35 West Forty-Fifth Street, New York City.

Denizens of the Colorado Desert—The life of an old prospector in his quest for gold, with the strange animal, reptile and scenic phases of the Colorado desert. 12 minutes. 16 mm., sound. For rent or for purchase. Hollywood Film Enterprises, Inc., 6060 Sunset Boulevard, Hollywood, Calif.

Toads—Complete life cycle of the common garden toad and the tree toad; their valuable service in the destruction of insect pests. 1 reel. 16 and 35 mm., silent. For rent. International Educational Pictures, Inc., 40 Mount Vernon Street, Boston.

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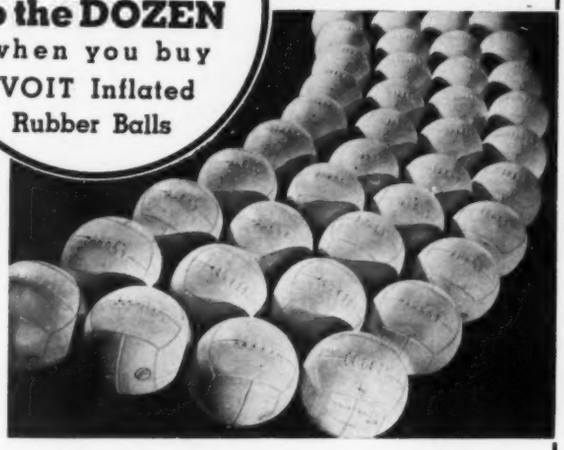

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Students use the individual combinations and the office a privately registered masterkey.

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For built-in lock installations specify the Dudley S-540. The combinations are speedily re-set without removing lock from locker—simply use special re-set key provided.

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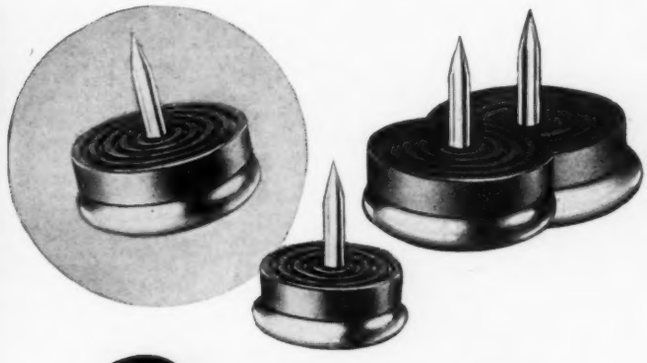

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The surface of Da-Lite Glass-Beaded Screens brings out the full beauty of color and black and white movies, filmslides and other visual teaching material as no other surface can. Images are brilliant, sharp and clear. There is *no sparkling—no glare.* The beads, applied by Da-Lite's *new* process, are guaranteed not to shatter off.

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VISUALIZING THE CURRICULUM. *By Charles F. Hoban, Charles F. Hoban, Jr., and Samuel B. Zisman. Illustrated. New York: The Cordon Company, Inc.*, 1937. *Pp.* 300. $3.50.

School professional libraries will be greatly improved by the addition of this volume on visual aids.

RURAL TRENDS IN DEPRESSION YEARS. *A Survey of Village-Centered Agricultural Communities*, 1930-1936. *By Edmund deS. Brunner and Irving Lorge. New York: Columbia University Press*, 1937. *Pp.* xvi+387. $3.25.

Significant study of social changes and trends in certain villages for which results of two previous surveys served as a base.

PRINCIPLES OF EDUCATIONAL PSYCHOLOGY. *By W. D. Commins. New York: The Ronald Press Company*, 1937. *Pp.* xiv+596. $3.

The organismic viewpoint in the application of psychological principles to the learning process.

SOCIAL PSYCHOLOGY OF EDUCATION. *By A. O. Bowden and Irving R. Melbo. First Edition. McGraw-Hill Series in Education. New York: McGraw-Hill Book Company, Inc.*, 1937. *Pp.* xv+296. $2.50.

Application of data on social psychology to educational problems, emphasizing human elements in the social process. Good discussion of social controls.

THE WONDERFUL WONDERS OF RED-YELLOW-BLUE. *By Faber Birren. New York: McFarlane, Warde, McFarlane*, 1937. *(Distributed by University Books, Inc., 232 Madison Avenue, New York City). Pp.* 48. $2.

A book for elementary school use that has unusual appeal for the children. A noted colorist brings some of his researches within the interests of the pre-adolescent.

AN EVALUATION OF THE ELEMENTARY SCHOOL WITH A FORECAST OF ITS FUTURE. *By J. R. McGaughy. Indianapolis: The Bobbs-Merrill Company*, 1937. *Pp.* viii+421. $2.

A specialist in elementary education makes his own evaluation of the current school. Worth reading.

THE COLONIAL PERIOD OF AMERICAN HISTORY. *The Settlements. Volume III. By Charles M. Andrews. New Haven: Yale University Press*, 1937. *Pp.* xiii +354. $4.

Professor Andrews continues his scholarly history of colonial settlements in this third volume, which concerns itself with Jamaica, New Netherland, the Jerseys, the Carolinas and Pennsylvania.

INTERPRETING THE PUBLIC SCHOOLS. *By John Erle Grinnell. McGraw-Hill Series in Education. New York: McGraw-Hill Book Company, Inc.*, 1937. *Pp.* xii + 360. $2.75.

A textbook on institutional interpretation with the major emphasis upon direct publicity. The importance of the teacher, while recognized, is still clearly subordinated to the administrator.

THE LASTING ELEMENTS OF INDIVIDUALISM. *By William Ernest Hocking. New Haven: Yale University Press*, 1937. *Pp.* xiv + 187. $2.

The concept of the co-agent State as one of the solutions through which we may avoid the totalitarian fallacies makes this small book unusually desirable reading.

WASHINGTON: CITY AND CAPITAL. *Federal Writers' Project. Works Progress Administration. American Guide Series*, 1937. *Washington: Government Printing Office*, 1937. *Pp.* xxvi+1,141. $3.

Description of our national capital that deserves a place in every school library as a special reference book.

ENGINES AND BRASS BANDS. *By Olive Beaupré Miller. Boston: Bruce Humphries, Inc.*, 1937. *Pp.* 376. $1.

The Midwest of the nineties is reconstructed in a delightful way for boys and girls and made available in a new popular, low-priced edition.

THE ELEMENTS OF RESEARCH. *By Frederick Lamson Whitney. New York: Prentice-Hall, Inc.*, 1937. *Pp.* xvii+616. $3.50.

Comprehensive presentation of research techniques in education.

HEALTH EDUCATION OF THE PUBLIC. *By W. W. Bauer and Thomas G. Hull. Illustrated. Philadelphia: W. B. Saunders Company*, 1937. *Pp.* 227. $2.50.

A sanely written handbook on how to educate the public to the value of health education.

FOOD FOR FIFTY. *Compiled by Sina Faye Fowler and Bessie Brooks West. New York: John Wiley and Sons, Inc.*, 1937. *Pp.* viii+384. $3.

Compilation of food formulas for cafeteria managers and dietitians, arranged to be especially helpful to small units.

ASTRONOMY FOR THE MILLIONS. *By Professor George Van Den Bergh. Illustrated. New York: E. P. Dutton and Company, Inc.*, 1937. *Pp.* xii+370. $3.50.

This book will be read avidly by junior and senior high school pupils. It has a definite place in the science library.

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HANDBOOK OF SUGGESTIONS FOR TEACHERS. *The Board of Education. Printed and Published in Great Britain. New York: The British Library of Information,* 1937, *(Distributors). Pp.* 600. $0.65.

The British view of elementary education as prepared in the form of suggestions for teachers.

Just Off the Press

EDUCATIONAL, PSYCHOLOGICAL AND PERSONALITY TESTS OF 1936. *Including a Bibliography and Book Review Digest of Measurement Books and Monographs of* 1933-36. *By Oscar K. Buros. Rutgers University Bulletin, Studies in Education, No.* 11. *New Brunswick: School of Education, Rutgers University,* 1937. *Pp.* 141. $0.75 *(Paper Cover).*

THE MATHEMATICS IN CERTAIN ELEMENTARY SOCIAL STUDIES IN SECONDARY SCHOOLS AND COLLEGES. *By Eugene W. Hellmich. Teachers College, Columbia University Contributions to Education, No.* 706. *New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* vi+125. $1.85.

DEVELOPING A HIGH SCHOOL CHEMISTRY COURSE ADAPTED TO THE DIFFERENTIATED NEEDS OF BOYS AND GIRLS. *By Margery Stewart Gillson. Teachers College, Columbia University Contributions to Education. No.* 709. *New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* vii+95. $1.60.

HOMEWORK IN THE NEW YORK CITY ELEMENTARY SCHOOLS. *By Peter J. Di Napoli. Teachers College, Columbia University Contributions to Education, No.* 719. *New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* 60. $1.60.

AN INTEGRATED CURRICULUM IN PRACTICE. *By Edison Ellsworth Oberholtzer. Teachers College, Columbia University Contributions to Education, No.* 694. *New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* xv+218. $2.35.

AMERICAN AGRICULTURAL PROBLEMS IN THE SOCIAL STUDIES. *By Kenneth E. Oberholtzer. Teachers College, Columbia University Contributions to Education, No.* 718. *New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* v+119. $1.60.

TYPOGRAPHER'S DESK MANUAL. *Identifying, Measuring, Combining and Specifying Type Faces. By Eugene de Lopatecki, Instructor in Layout and Design, New York Employing Printers Association. New York: The Ronald Press Company,* 1937. *Pp.* 87. $3.

REMEDIAL READING. *A Monograph in Character Education. By Marion Monroe and Bertie Backus. Boston: Houghton Mifflin Company,* 1937. *Pp.* xi+171. $1.40.

PUPIL PROGRESS POLICIES AND PRACTICES. *By Garth H. Akridge. Teachers College, Columbia University Contributions to Education, No.* 691. *New York City: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* viii+76. $1.60.

OCCUPATIONS IN RETAIL STORES. *By Dorothea de Schweinitz. Scranton, Pa.: International Textbook Company,* 1937. *Pp.* xviii+417. $3.50.

AMERICAN EDUCATION. *Addresses and Articles. By James Rowland Angell. New Haven: Yale University Press,* 1937. *Pp.* 282. $3.

OUR CALIFORNIA STATE TAXES. *Facts and Problems. By H. Dewey Anderson. Stanford University: Stanford University Press,* 1937. *Pp.* viii+305. $2.75.

EDUCATIONAL BROADCASTING, 1936. *Edited by C. S. Marsh. Proceedings of the First National Conference on Educational Broadcasting, held in Washington, D. C., on Dec.* 10, 11 and 12, 1936. *Chicago: The University of Chicago Press,* 1937. *Pp.* xx+463. $3.

THE NEW COMPREHENSIVE STANDARD SCHOOL DICTIONARY OF THE ENGLISH LANGUAGE. *Edited by Frank H. Vizetelly and Charles Earle Funk. New York: Funk and Wagnalls Company,* 1937. *Pp.* xiv+1,008. $1.32. *(Price to Schools:* $0.99*).*

WHAT DOES RESEARCH SAY? *A Statement of the Implications of Educational Research for Teaching in the Elementary School. Bulletin No.* 308, *Department of Public Instruction. Lansing, Mich.: Department of Public Instruction,* 1937. *Pp.* 146. *(Paper Cover).*

AN INTRODUCTION TO PROGRESSIVE EDUCATION *(The Activity Plan). By Samuel Engle Burr. Revised Edition,* 1937. *Illustrated. Cincinnati: The C. A. Gregory Company,* 1937. *Pp.* 84. $0.50 *(Paper Cover).*

GENERAL BIOLOGY STUDY-BOOK. *By Holger H. Van Aller and Dorothy Van Aller. New York: Globe Book Company, Inc.,* 1937. *Pp.* xi+181. $1.

BETTER ENGLISH THROUGH PRACTICE. *Book Two. By Alfred A. May. New York: Globe Book Company, Inc.,* 1937. *Pp.* vi+186. $1.

OBJECTIVE TESTS IN FRENCH. *(Six tests). By Helen K. Burtt. New York: Globe Book Company, Inc.,* 1937. *Packages of 25 of any one test,* $1.25 *(Paper Covers).*

THE FAMOUS JIMMY. *By Enid Blyton. Illustrations by Benjamin Rabier. New York: E. P. Dutton and Company, Inc.,* 1937. *Pp.* 59. $1.50.

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We see a good many schoolroom floors in the course of a year and have distinctly got the impression that floor coverings are becoming more seductive. This idea meets with our entire approval, too, since we have long held the belief that children need to be lured along the paths of learning. And now that the Sloane Blabon Corporation (New York City) has decided to provide an artistic pattern for the footwork of a sizeable portion of the nation's young, we need worry no longer. This company specializes in achieving an atmosphere of rich, modern simplicity with its Custombilt tile for superintendents' offices or libraries; or it gives dignity and harmony to your halls with its inlaid linoleums in straightline and marbletone. It is prepared to work out special designs for floors, and if this fact doesn't send schoolmen scurrying to the nearest Sloane Blabon office, we will know that they are only mildly interested and will prefer merely to write for suggestions.

Epicurean Flavor

To us a cold ham sandwich becomes food most delectable if served artistically on a colorful plate of modern design. Likewise, spinach acquires epicurean flavor and shy vitamins turn into morsels of ambrosia when encouraged by a beautiful setting. In our favorite cafeteria dishes with gay and cheerful designs are powerful inducements for getting boys and girls to eat the right foods. Recognizing the value of beauty in tableware the Onondaga Pottery Company (Syracuse, N. Y.) has designed its china for cafeterias and lunchrooms with emphasis on color and tasteful design. The company believes in durability, too, and assures it by applying color under glaze. A specialty for preventing breakage is the Econo-Rim, which also saves space on the shelves and in the dishwasher.

Brighten the Corner

Have you a dark little corner in your cafeteria that you'd like to see brightened up a bit? We know of a red and white machine as cheery as a Christmas tree that will do the job for you. It can snuggle into a spot 2 feet square and it stands only 50 inches high on its sturdy little legs. You will think of a dozen uses for it while you are putting the machine in place (for it is portable and all you have to do is plug it in). Feed it three-fourths of a gallon of mix for chocolate malted milks and, presto, you have a whole gallon of soft-frozen malted milk and a line of young customers from here to the cafeteria door. While your back is turned it will whip up a batch of ice cream just like any counter freezer, and with your cooperation will turn out an endless variety of toothsome desserts. This hardworking midget is made by Freezmaster, Beloit, Wis.

Library Renaissance

Our route from the cafeteria took us past the library and here we paused to investigate another matter that has been troubling us of late, notably, what has happened to the school bookworm? As it turned out, we needn't have bothered because Species 1937 is quite another model than the one we used to know in our far-away youth. Seated in a comfortable maple chair and surrounded by more chairs and tables of the same rich, warm wood, he burrowed still further into his book, much too comfortable to be bothered by a passer-by. Remembering the hours we perched precariously on ugly and wobbly chairs or bent over scarred tables, we felt a pang of envy. Contributing to this library renaissance are Gaylord Brothers, who may be found either in Stockton, Calif., or in Syracuse, N. Y., busily at work on pieces to make your library the envy and depair of early American scholars such as we. Their craftsmen have but one mission in life: to make furniture that will remain beautiful through years of use by wiggling and squirming bookworms.

Signal for Showers

Now that the football season is here again, school administrators and engineers have gone into a huddle and are signaling for more showers for the moleskin squad. The play shifts to the Bradley Washfountain Company and it intercepts a pass to make a touchdown with its multi-stall showers having shower partitions of stainless steel (a new refinement). The backfield makes a concerted tackle on the nearest unit, but the Bradley line stands. Stainless steel for walls and doors of the shower, says Bradley, can block a dozen husky guards bent on a clean-up. Showers are obtainable in the five-in-a-group and in the semicircular units for three, and the little space they occupy is unbelievable. In case you haven't them in your school, we can tell you that a shower for five takes no more room than two of ordinary size. Moreover, there is a mixing chamber, which Bradley engineers thought up to prevent scalding the hides of pigskin pushers. Each unit requires only three plumbing fixtures and the rounded corners in the shower itself will gladden the heart of your janitor. The Bradley address is Milwaukee, Wis.

Nonskid

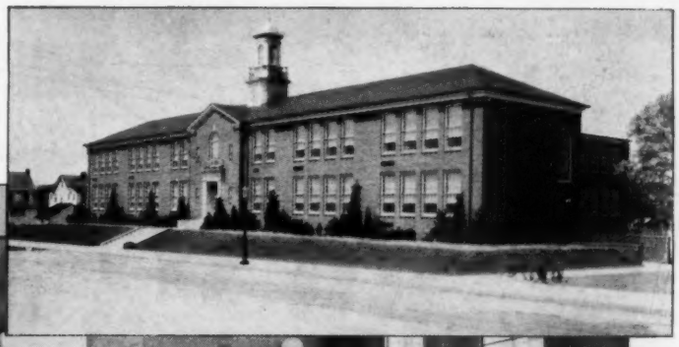
Speaking of showers reminds us of a new rubber aquatic mat we chanced upon the other day (no, we did not stumble upon it). It was resting primly on the floor and fairly purring with pride in its usefulness. We ran an inquisitive finger over the rounded ridges on each link while the principal explained that this feature gives Messrs. Slipping and Skidding a beating and still is kind to bare feet. So convincing he was, that we, who have let a mere sliver of soap down us time and again, would have burst into tears were we not the strong and silent type. It is enough for us to know that these mats are easily cleaned and quickly drained. The Goodyear Tire and Rubber Company, Inc., Akron, Ohio, whose brainchild these are, have thought still further of your convenience and are prepared to furnish mats to fit irregular area contours for a tuppence or so extra. If the mat is to be wet constantly, the company will provide brass binding.

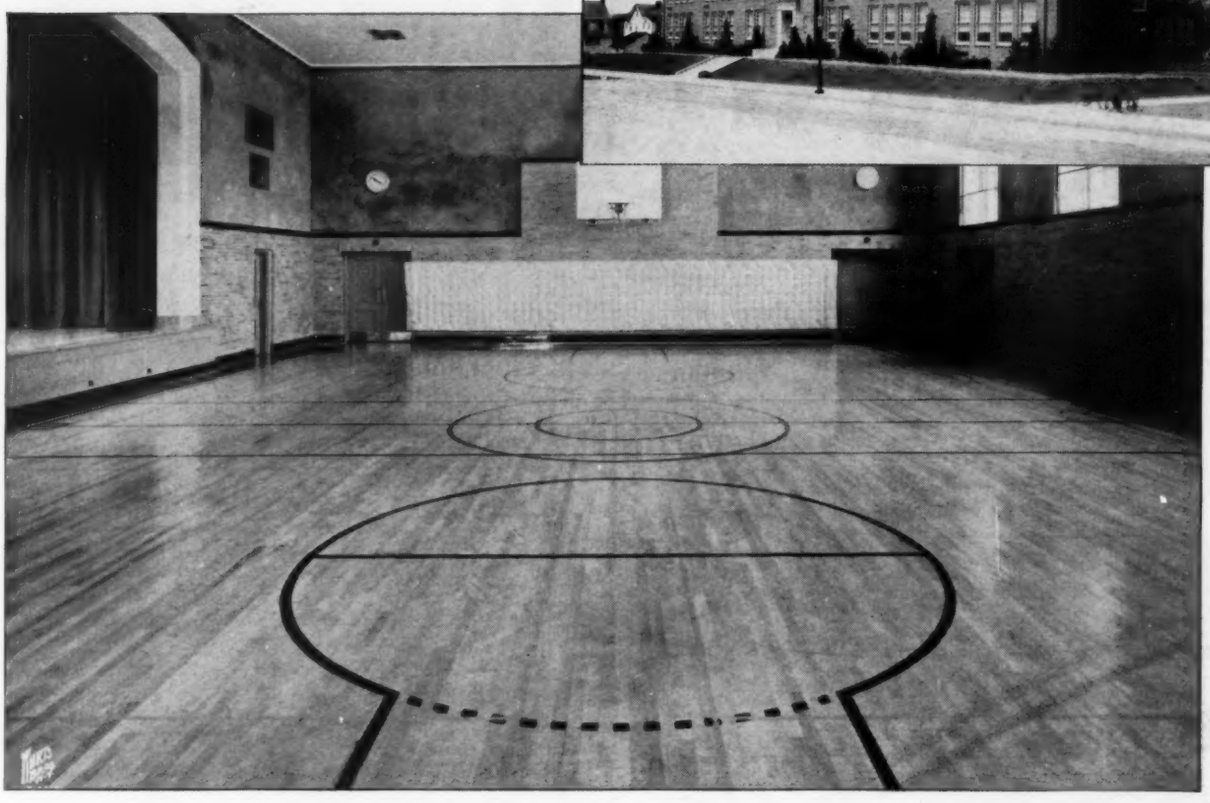
Débutante

If you haven't ordered orchids for one of this season's cutest débutantes—one who is destined for a big rush by schoolmen—you are lacking in social consciousness or you have deplorable manners. In either case you are likely to regret it. For this young miss is certain to become a popular member of the schoolroom family and the teacher's darling.

We refer, messieurs, to the youngest child of Standard Mailing Machines, Inc., Everett, Mass., who has just made her bow. As pretty a lass as anyone would care to see, her svelte lines conceal two storage compartments where duplicator supplies and reams of paper would cuddle with the least encouragement. She has a nice flat top, has this handy cabinet, and we suspect that the duplicator, once parked there, would be cured of its roving habits.

MFMA Northern Hard Maple, 25/32" thick, 2" face, T & G, end matched, was specified and laid below grade on wood sleepers — the gymnasium, stage and dressing rooms of the new Franklin Grade School at Hewlett, N. Y., designed by Lawrence J. Lincoln, Architect, Cedarhurst, N. Y.





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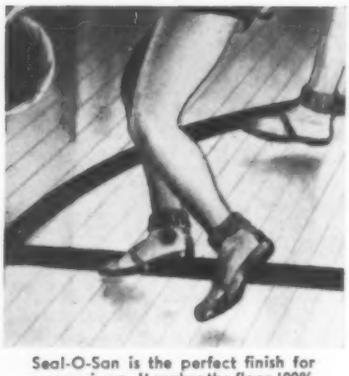

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Side Glances—

IT IS easy for the school interpreter to make mistakes. In his haste to get a complete public relations program into existence, he succeeds in getting the school talked about — but not to his liking.

Next month Dr. Frederick J. Moffitt of Hamburg, N. Y., will tell some of the common mistakes made in school interpretation. Naturally the school administrator must be the main agent. If he bumps his head against the wall of public indifference, if he stubs his toe on the rock of the public press, if he loses his professional dignity at seeing himself misquoted and misrepresented, it may be that he had it coming to him, Superintendent Moffitt suggests. Through such experiences he will become a better interpreter.

PORTLAND, ORE., has a new superintendent of schools. When Superintendent Rice approached the retirement age, the board of education was uncertain as to the best means of judging the fitness of candidates for the post soon to be vacated. It appointed a committee of men in higher education in the state whose job it was to narrow down the applicants to five or six names. The committee first consulted with a dozen or more interested groups of Portland citizens and set up a seven-point standard for evaluating candidates. The country was looked over, and administrative experts here and there recommended several candidates whose capabilities seemed peculiarly valuable to the city of Portland. The man finally selected was, therefore, not "hand picked," either by the committee or by any pressure group. The board was not annoyed by any high-powered salesmanship on the part of either self-seeking candidates or their interested friends.

Dean J. R. Jewell of the school of

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education, University of Oregon, will tell the whole procedure in an article for the January number, giving the form that was worked out for use in obtaining information about the candidates.

THE issues that face the citizen today are befogged completely by propaganda. How can he be expected to make intelligent decisions on these issues unless he first dispels the fog? And how can he do that unless he knows what propaganda is and how it operates and why?

So says Clyde R. Miller of Teachers College, Columbia University, secretary of the Institute for Propaganda Analysis, in an article scheduled for the next issue on the need for teaching school children propaganda methods and effects.

WHOEVER reads the article by Architects Harrison and Fouilhoux beginning on page 53 of this issue will be looking forward to their second contribution on natural illumination of classrooms in the January number called "Design of Window Areas."

BACK in 1929, the town of Teaneck, N. J., built its first high school building, but it built with an eye to the future. It spent a dollar in the hope of saving two. As was anticipated, the opening of the George Washington Bridge across the Hudson made Teaneck a popular place for young New Yorkers who wanted homes and families. The high school has recently been enlarged to provide for 2,900 pupils in a combined junior and senior high school, the largest one in New Jersey. Ralph Hacker of Hacker and Hacker, architects of Fort Lee, N. J., will describe the project in an early issue.

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Greetings

Merry Christmas!

Happy New Year!

What a happy arrangement, to have Christmas just before New Year's Day! Christmas is the time to "square accounts" for the year so nearly gone. Disappointments and discouragements are swept away by the flood tide of Good Cheer at Christmas. It brings new Hope and Confidence for the New Year.

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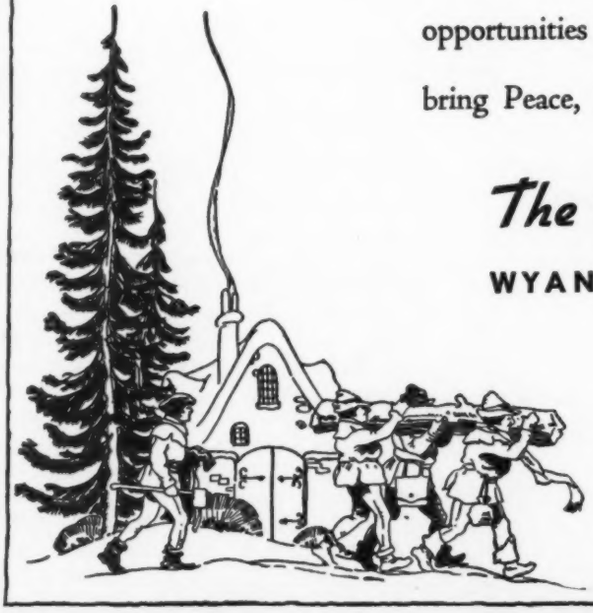

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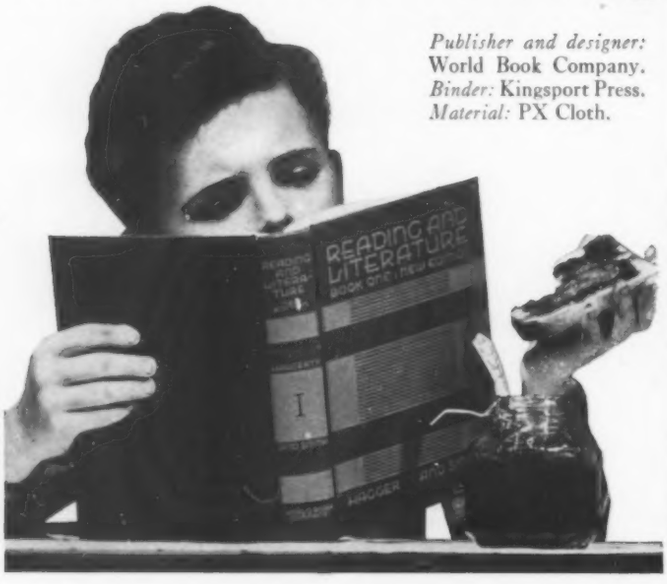

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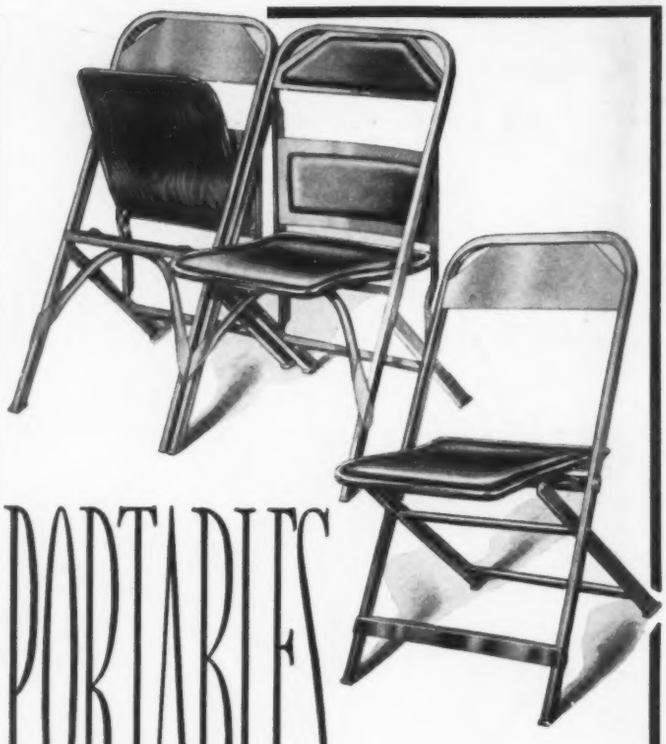

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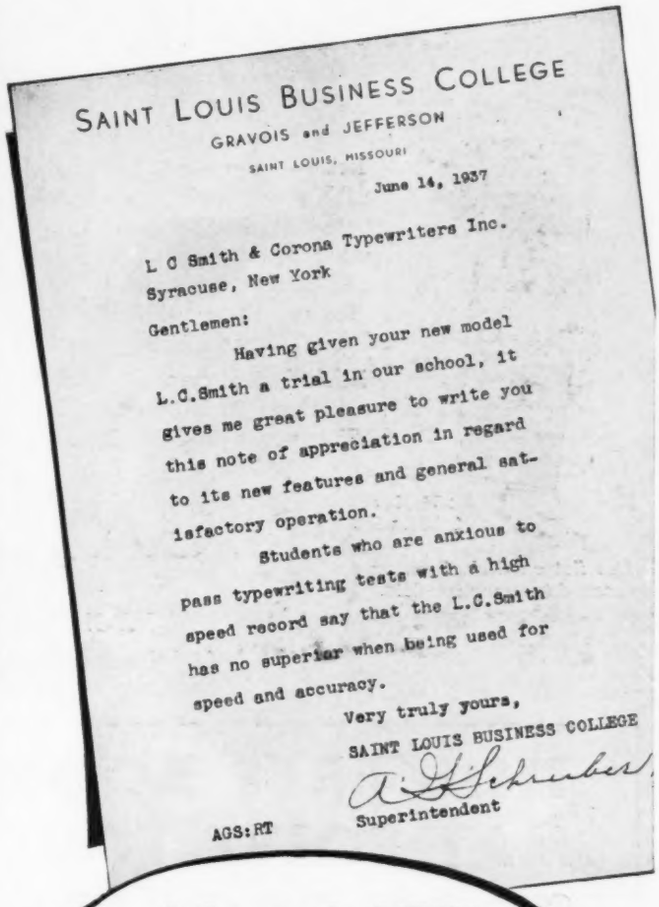

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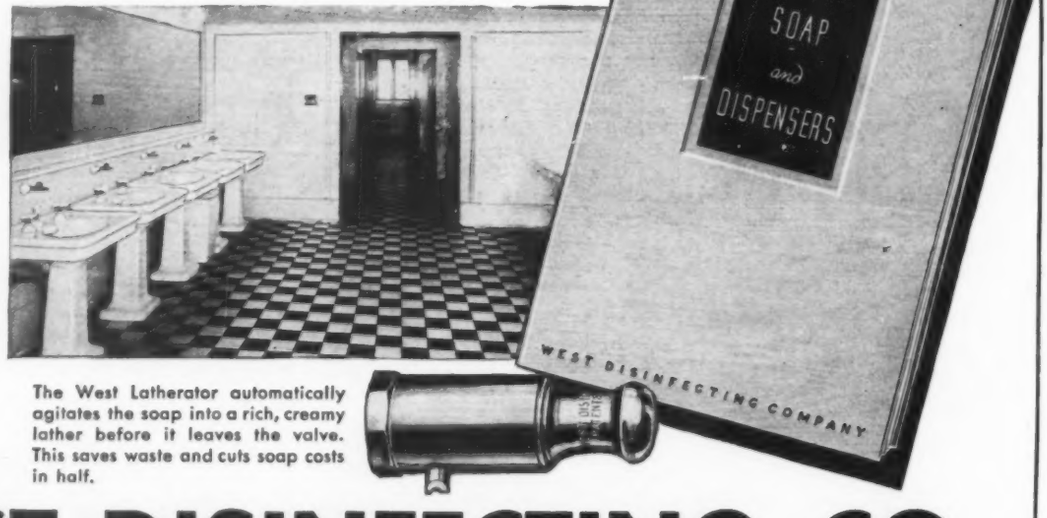

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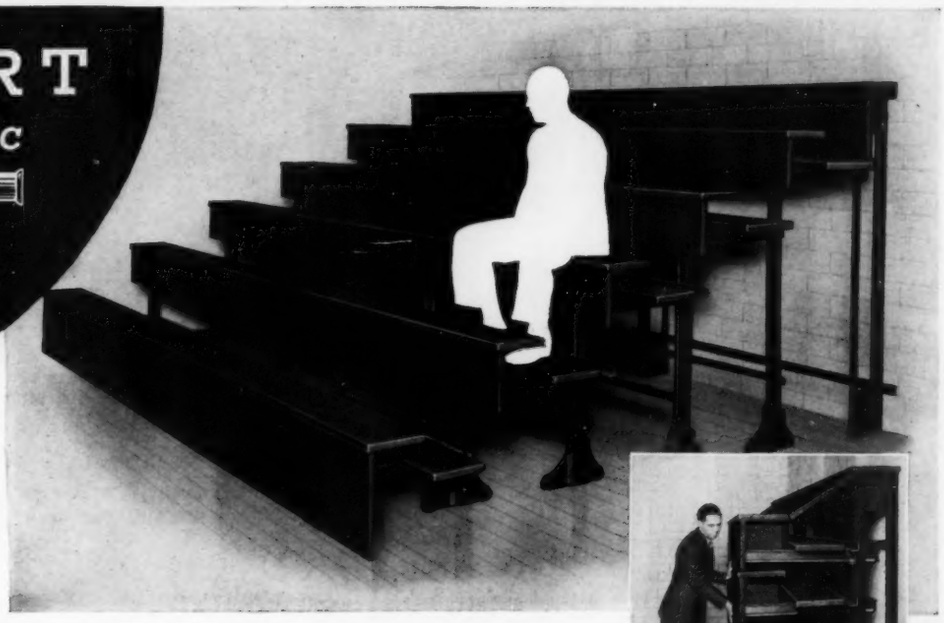

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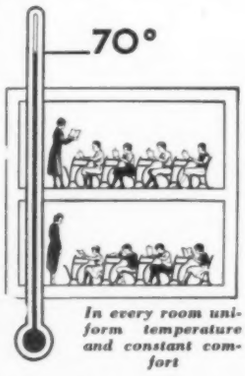

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LOOKING FORWARD

Who Are Taxpayers?

TIME was when the greater portion of school revenues was derived from the local property tax and the suffrage restricted to the owners of property. Long after property restrictions as a qualification in general elections had been sanely abrogated, the only change made in the status of school electors was the extension of the ballot to parents who had children in the schools.

Different methods of taxation and the increase in state aid to schools, derived largely from the sales taxes of other levies not affecting real property, have changed this situation completely. Now every resident within a school district pays a significant part of the total taxes and there is not even the justification of property ownership to maintain the old electoral restrictions.

The time has come when the states should remove these handicaps upon the school elector and give every citizen who is a resident within the local district a voice in the choice of his educational representatives.

San Antonio Problems

THE teachers in the public schools of San Antonio, Texas, are considering formation of a union directly affiliated with labor instead of continuing as a part of the independent state professional organization. The chamber of commerce and the manufacturers' association have passed resolutions requesting that the teachers remain independent. The board of education has gone further, considering that any attempt on the part of the teachers to affiliate with labor is an act of insubordination against its authority.

The reasons for the desire on the part of the teachers to form a strong, closely knit organization are apparently a direct result of the conditions that have prevailed in this school system for many years. The teachers believe that political forces in control of the schools have forced professional administration to accede gradually to the concept that the educational organization is similar to that of industrial organization, a sharp division between management and labor. To the professional it is obvious that distinctions that exist in industry between management and labor are completely untenable in the professionalized educational activity. The ensuing autocracy of executive organization results in a lowering rather than an increase in teaching efficiency. The difficulty in this instance is of long standing and has been growing more intense as a result of the depression.

Our own attitude is that in the long run the teaching profession will probably make greater gains by remaining as an independent professional group without direct alliance with either capital or labor. However, there are other points of view on this subject that also merit consideration.

The right of public school teachers to organize professionally either as an independent professional group or an affiliate with one of the national labor organizations cannot be questioned. It is clearly an area in which a board of education does not have jurisdiction. Neither can the attempt of the teachers to organize for mutual protection, professional advancement and the improvement of the schools be construed as an act of insubordination.

It appears that if the board of education has prejudices against professional organization affiliated with labor it might be well to consider possible modification of policies and practices that have created the feeling in the minds of the teachers that such organization is essential to the continued welfare of the schools and the protection of the teacher.

It should be the desire of all interests involved to avoid conflict that will most certainly be reflected in the work of the schools. In light of current conditions it is apparent that the remedy lies with the board of education in considering possible reforms rather than in the threat of reprisal for individuals who are merely exercising their civil rights of making a professional choice.

A Good Lesson

SOMETIMES a story brings home a worthwhile lesson effectively. James M. Spinning, superintendent of the Rochester public schools, at a recent professional meeting gave his audience a quaint quip that is worth repeating as a general illustration. Here it is:

"I should like to begin the threatened discourse this afternoon by telling you a story with two points—

which is at least one more than most of my stories have. I think you will be quick to find the application of both.

"In the Ozark Mountains before the days of compulsory schooling there was born a boy who did not talk at the normal age and whose parents, believing him to be a deaf-mute, reared or neglected him as such. He had come to be ten years old without ever speaking a word. But one day he was watching his father mend a fence. The farmer had assumed that posture best calculated to stimulate the personal attention of all properly motivated farm animals. Suddenly he was startled to hear his son exclaim, 'Look out, Pop, here comes the bull!'

"Quickly the father evaded the charge of the lowered horns, and as soon as the bull and the danger had passed turned to congratulate his son on at last giving tongue and to demand why he'd been ten years in finding it. 'Well, Pop,' replied the lad, 'this is the first time I ever had anything worth saying.'

"The boy's first remark you have rightly interpreted as a warning to audiences at educational meetings and the second as a suggestion to the speakers."

A United Front

CONVINCED that nothing but a strong professional campaign of popular education can arouse a militant public opinion in Chicago against the generation-old control of public education by the local political machine, the Chicago teachers have perfected a new organization and are ready to present a united front in a vigorous campaign for improved schools. The four independent teachers' unions that have heretofore operated in Chicago gave up their individual charters, the first of which was issued thirty-five years ago, and received a single new charter from the American Federation of Labor. The new union, with 6,500 members, has promulgated a four-point program that includes: restoration of basic predepression salaries in full; proper school conditions for pupils and teachers; properly qualified teachers, and the adoption of the merit system in the public schools. The single union will operate completely under its own professional leadership. The new organization and the progress of the general long-time program of achivement its members have adopted as an objective will be watched with interest by the educational world.

The Governors Worry

THE 1937 conference of governors was seriously disturbed about possible federal inroads over the control of public education. Practically every state executive present expressed himself as did Governor Barrows of Maine, who said, "I most certainly fear control of education by the federal government." The comment of Governor Hoey of North Carolina on the general shift toward state support was that "in my state the municipalities accepted state funds and the burden of education gradually shifted to the state. The same thing will happen in the federal government."

The only dissenting point of view was expressed by Governor Townsend of Indiana who felt that "the federal government certainly never did the state of Indiana any harm when it meddled with roads." He did not deny the danger of federal control over education but drew an analogy that has considerable merit. Unwittingly the Indiana executive placed his emphasis on the real problem in continued and enlarged federal aid to public education. The other governors expressed their fear of policy or program control through subventions for current operation of the schools or for specific aid to specialized curricular areas, a fear that has probably grown out of their progressive experience with Smith-Hughes subventions and with emergency grants-in-aids during the depression.

Extension of federal aid to education is certainly desirable. However, in this field there is a definite choice. Grants for program or for personnel will undoubtedly result in ultimate direction and control of program by the federal authority; aid for school buildings will provide for the termination of control upon completion of the plant. The first practice is extremely dangerous to the continuation of public education in the United States as a partnership between family and state; the second method will stimulate essential structural and administrative reorganization and will avoid possibility of interference with curriculum or personnel.

The teaching profession faces a realistic choice. Certain federal executive bureau personnel, members of Congress and others closely allied to federal service admit freely in "off the record" conversations that federal monies will not be given without essential controls through which the effectiveness of their use may be determined. They smile broadly at the naïve assumptions of certain educational leaders that the piper does not call the tune. Those who are definitely favorable to a progressively greater centralization of federal authority through the creation of strong intermediate regional authorities frankly state that their theory of centralization demands ultimate federal control of public education. They feel that some of the professional organizations are carrying the first stages of the battle much better than they themselves might if they urged these changes directly.

The same individuals also admit that if federal aid were granted directly for school buildings it might be possible to maintain local control of public education for a much longer period.

The totality of support for public education would be the same whether the federal government subsidized program or plant. A specific sum of money given for school plant, supplemented by an equal amount of support by the individual states, would release an equiva-

lent amount for program improvement. It would also make it possible to eliminate as a finance policy the conventional methods of borrowing for plant extension. Adoption of the pay-as-you-go practice would permit the current expenditures for interest on existing debt, a very considerable sum in itself, to be added ultimately to current operation.

It is desirable from all points of view that federal aid be directed to the area of the school plant, paralleling federal aid for roads and other public improvements. In the opinion of those well informed of current possibilities, it now appears as if a grant for buildings is the only possibility of early congressional action.

Membership Is Important

WHEN teachers and parents frequently complain about the large size of classes in elementary and secondary schools some administrators are prone to turn the question with the statement that "our reports are based on membership. Actually the attendance is 10 to 15 per cent less." Since the layman does not understand child accounting technique this answer appears satisfactory. It does not convince the teachers but their protests seem of little avail.

Class size is a distinct factor in the efficiency of instruction, although only one of a series of interrelated elements. Studies prepared so far with respect to effect of size on promotion are only part of the story. They must not be taken too seriously. They have no finality.

Membership and not attendance should be taken as the criterion of class size. Membership indicates the limits of teacher responsibility for child educational welfare. Absence merely adds to the burden.

The quaint type of reasoning that offers membership in class size for publication and then secures solace on the absurd assumption that absence decreases rather than increases work is difficult to comprehend.

A class of forty-five that shows an average absence of 10 per cent does not reduce responsibility to forty children as some administrators appear to believe. Instead, it actually increases responsibility and the work-load to the neighborhood of fifty! Each absentee means extra work for the teacher.

If class size based on membership is forty, it would be more nearly true to say that class size based on teaching effort is actually forty-four. There is no real sense in self-deception on this score. Statistics have no value unless they are interpreted in light of the conditioning factors. Current accepted methods of interpretation certainly do not fool the teacher who does the work nor do they change the actual conditions under which the children work. It is difficult to believe that the administrator really believes what is so obviously impossible.

Much of this effort must now be given outside of the regular load since there is no free time for coaching during the school day. The conscientious teacher does give this extra service at her personal expense. No school district has the right to make such demands upon the already too heavily loaded instructor.

Public education needs much smaller classes. If this fact is squarely faced, progressive community education may provide a supporting public opinion to effect changes. No progress will ever be made if educators cling to invalid concepts.

Teaching Propaganda

FOR the last four years we have been urging the need for the teaching of propaganda methods and effects in the public schools on both the child and adult level. A realistic social education for the child means that he must be made acquainted not only with the theory but also the practice of democratic operation. It is necessary to learn as he progresses through the schools the need for careful analysis of the methods of propaganda. The adult in like manner should be taught propaganda methodology and the means for protecting the individual and the group against bad propaganda. Propaganda cannot be talked away. It is constantly present as the dominant device for the creation of public opinion. It operates in all areas of human endeavor.

It is welcome news that a group of outstanding educationists have organized an institute for the analysis of propaganda. *Propaganda Analysis* will appraise monthly for professional men and women the current propagandas, indicating their sources, their purposes and the channels through which they operate so that individuals may become more critical in their consideration of plans and programs with which they are urged to associate themselves. This purpose will be achieved through a popular, nontechnical monthly letter. Prof. Clyde R. Miller, Columbia University, will be responsible for the immediate direction of the work.

While *Propaganda Analysis* is pointed to the adult need, members of the same institute are now promoting experimentation in the teaching of the methods and means of recognizing and evaluating propaganda on a secondary school level. Practical teaching units designed for use in the social studies will probably be available within the year to subscribers to *Propaganda Analysis*.

It is to be sincerely hoped that teachers, principals and superintendents will take advantage of this unusual opportunity and will also stimulate its use through the National Congress of Parents and Teachers, the American Association of University Women, the League of Women Voters and the General Federation of Women's Clubs. It merits general support as a significant forward-looking movement.

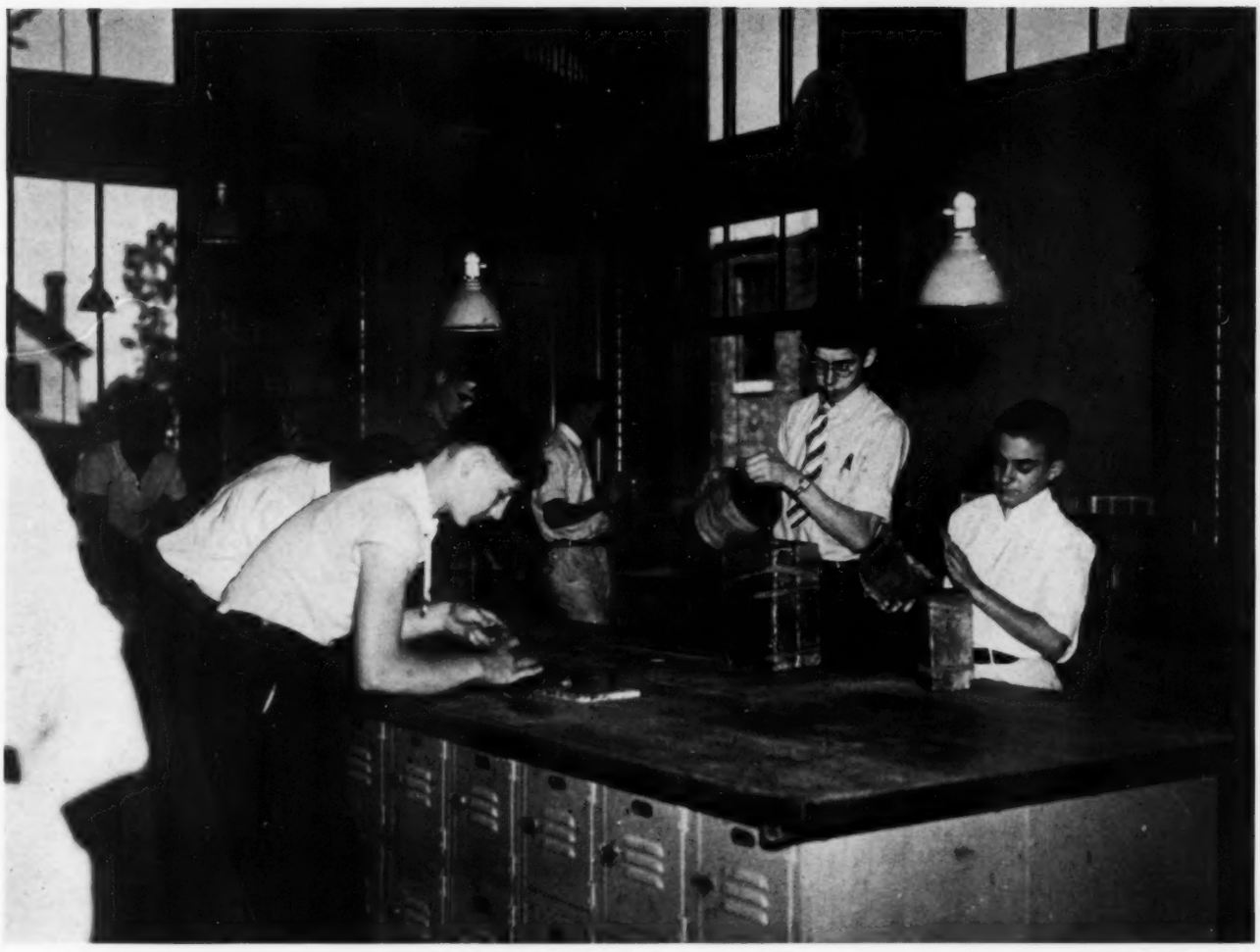
The Editor

Norwood Molds for the Future

By HERBERT H. SANDERS

A CERAMICS unit has been a part of the industries laboratory of Norwood High School, Norwood, Ohio, for the last six or seven years. During the last two years, a definite effort has been made to offer a broadened and comprehensive program.

The purpose of the Norwood laboratory is not vocational training, but to introduce the pupil to the field of ceramics. Here he can explore to his fullest capacity. If exploration



Opposite Page: Pupils in the ceramics laboratory at Norwood High School, Norwood, Ohio. Below, an interested group of boys is working on a potter's wheel. Above, a boy is loading a small experimental kiln with handmade pieces.

This Page: Laboratory problems start with simple projects which involve manipulative skills common to younger children and primitive civilizations and close with a well developed skill on the potter's wheel, examples of which are shown below.

leads to a vocation in later life, all well and good; if not, it has served to help the pupil become more familiar with one phase of our complex, present day industrial civilization. It has helped him more fully to appreciate the beauties of a fine ceramic form or a rare glaze. It has helped explain some problems of the ceramics worker and of the art; it has better advised a potential consumer of the nation's products, and it has laid the foundation for a possible, interesting and profitable avocation.

The work in the laboratory is composed of a series of units or problems. These problems are of varied difficulty and are planned to give the pupil the best possible conception of the ceramics industry and its products.

Laboratory problems start with simple projects which involve manipulative skills common to younger children and primitive civilizations and close with a well developed skill on the potter's wheel or kick wheel. The rate of progress from one project

Advanced pupils are given a broader scope of laboratory offerings. One of the boys at the left, for example, is using the jigger wheel. Pupils learn how glazes are made and applied to the ware, how clay is prepared for use and a kiln is loaded and fired. Each pupil is individually instructed in decorative processes. Below are some of the best handmade pieces.

to another is determined entirely by the pupil, his abilities and interests. All teaching is based upon individual instruction. There is a teaching level for each member of the group, each pupil working to his capacity regardless of the average level achieved by the majority.

The actual grouping of an average class would include seventeen eighth graders, thirteen ninth graders, four tenth graders, one twelfth grader, and one of the special ungraded pupils of the underprivileged group. The pupils in the eighth grade come into the laboratory for one forty-five-minute period each day, while those of the ninth grade and above are there for two forty-five-minute periods each day. Ungraded pupils may be in the shop from one period to four, depending upon their abilities elsewhere in the school.

The average pupil starts work in the ceramics laboratory during the first semester in the eighth grade, spending an exploratory period of six or seven weeks. This procedure is repeated the second semester for a period of the same length. If during this time he is found to have an aptitude for ceramics, the pupil is permitted to spend full time working at it throughout the entire eighth year.

The beginning work for the eighth grade is a group of coiled projects, through which the pupil familiarizes himself with qualities of clay and its reaction under different kinds of treatment. After completing the coiled projects, he generally elects to cast slip or liquid clay in plaster molds. Here he may spend the remaining time if he desires, although this is not compulsory. After slip casting experience, each pupil is encouraged to spend some time on the jigger wheel and to produce one piece on the potter's wheel before leaving the eighth grade.

After completion of the exploratory eighth year, work in the industries laboratory is elective. The advanced pupil starts immediately to concentrate upon the mastery of throwing on the potter's wheel or the kick wheel. Throwing requires patience and effort and weeks or months of practice to develop satisfactory skill. As the advanced pupil works toward production of better designed and constructed products on the wheel, at the same time he does individual research in special bodies and glazes. Work of this kind requires a basic knowledge of chemistry and physics. Frequently it becomes necessary for the ceramics teacher to instruct in chemistry and physics as well. A few chemical symbols and facts presented at this time will be retained much longer since an opportunity is presented for their practical application.

As projects increase in difficulty and size, attention is given to decoration. Pupils who do not wish to decorate their handiwork may leave it undecorated. A complete fund of information, covering a wide range of decorating methods, is available for both beginning and advanced pupils. Each pupil is individually instructed in decorative processes. He may consult fine photographic examples of the potter's art. These

develop appreciation for fine pottery and teach decorative processes used by master craftsmen.

This teaching covers the work done by most pupils. Occasionally, when a pupil develops decidedly superior ability some more advanced problem is necessary. Since he has acquired skill on the potter's wheel, and has conducted research into bodies and glazes, he will demand a more intricate or complicated project to test his ability. For him we have planned research into ceramics history, including historic reproductions of the potter's art. Possible projects applicable to the advanced pupil are reproductions of a Tzu-Chou vase, a Ming bowl, a Greek amphora, Egyptian jewelry, Pennsylvania Dutch slip ware and a Japanese tea ceremony bowl.

To complete their projects pupils must have some knowledge of kilns and their operation. An effort is made to teach each pupil the process of loading, firing and unloading the kiln before he leaves the ceramics course. There are three kilns in the laboratory: a small electric one for temperatures up to Cone 06, the interior of which is 10 inches by 8 inches; a large gas-fired kiln, in which the majority of the pieces are fired, and a smaller gas-fired, open, up-draft kiln for temperatures up to Cone 9.

Before a unit in ceramics can be put into operation, the functions of such a course should be understood. During the last two years the number of boys accommodated in the ceramics laboratory has varied from 167 to 208 per day. Of this number approximately one-half are eighth grade pupils, the remainder being made up of advanced pupils electing ceramics. More advanced pupils would take this course if there were room to accommodate them. The majority in the advanced section are ninth grade pupils who have acquired a fairly substantial knowledge of the field during the previous year.

Several factors stimulate the interest of advanced pupils who have not previously found ceramics interesting. The first is the broadening of the scope of offerings in the laboratory. Many have never seen a jigger wheel, a ball mill or a kick wheel. They did not know how glazes were made or applied, how clay was prepared for use or a kiln loaded and fired.

A definite effort has been made to have all pupils participate in the preparation of clay for construction. This is the process of mixing powdered clay with water until it is of proper consistency, then working it out on the plaster slab and wedging table until it is ready for use on the wheel or for coiling. Each pupil has had a part in preparation of the slip he used in plaster molds. All kiln-loading and most of the unloading are done by pupils. Actual operation of the kiln is closely supervised by the instructor. All glaze preparation, which includes weighing out of chemicals according to carefully worked out formulas and grinding in the mortar and pestle or mill, as well as the compounding of new glaze formulas, are carried on by pupils. The application of glaze to the biscuit fired pieces is completely the pupils' responsibility. A majority of decorative designs are individually worked out by pupils.

The second most stimulating item is the finished product. At the close of this school year, more than two tons of dry clay will have been used. The number of pieces produced will total approximately 1,200. Thirty-five of the best handmade pieces, both coiled and thrown, the work of fifteen different boys, were entered in the National Scholastic Exhibition at Pittsburgh. Twenty of the thirty-five pieces were retained for the National High School Art Exhibition and the Traveling Exhibition for 1937-38. Two competitors received prize awards and six others were presented with certificates of honor.

Why Ignore Pupil Personnel Services?

By ARCH O. HECK

ADMINISTRATIVELY the pupil is being ignored in the American public school. We have recognized such problems as finance, curriculum making and supervision of teachers by the appointment of assistant superintendents to care for them. Despite the fact that the pupil is the reason for these activities, his place in the world of administrative organization is most insignificant and is often entirely ignored.

We have, of course, such agencies as children's clinics, visiting teachers, counselors, attendance workers, nurses, physicians, psychologists and pupil accounting officials. This provision of such pupil personnel workers is fine. The difficulty is that all too frequently these services are merely established upon an experimental basis. With few exceptions cities have seen no need for giving effective unity to these services, and except in large cities very few such services are available.

The necessity for these services has vastly increased during the last ten years. The spectre of unemployment has created mental as well as physical problems in children which cannot be ignored. The provision of clothing, of food and medical care, moreover, is by no means the most important of the needs of these children. They need even more a sense of family, personal and economic security. These various pupil personnel services are aimed at the solution of just such problems.

We need, therefore, administrative recognition of pupil personnel services by placing them under the supervision of an assistant superintendent of schools whose sole responsibility would be their development and effective use.

Attendance and visiting teacher service could thus be better related to counseling, counseling and guidance would not be developed independent of and without regard to psychologic and psychiatric services, and all these services could be seen in their relation to health and medical services.

At present these agencies, when provided, are found attached to a variety of administrative officers. Functions overlap, jealousies are created, agency competes with agency for cases, and too frequently the development of a strong agency becomes the motivating drive rather than service.

"We Hold These Truths—"

By CLAUDE C. LAMMERS

DURING the past summer an institute on general education was held at the Center for Continuation Study at the University of Minnesota. In seminar meetings and lectures men and women who are contributing to the progress of what we denote as "general education" discussed its meaning, its function and its program. It became apparent as the meetings progressed that general education does not imply either a specific curriculum or a specific type of school organization. Only in the underlying educational philosophies of the speakers can we find a full measure of agreement.

Our educational practices are determined by how we answer the question: "What is the measure of a good life?" There are those who would measure the worth of an individual by his contribution to a cause such as the growing supremacy of a race, an empire or a form of government. To those who militantly espouse such a cause, life is visualized in terms of service or sacrifice, noble if their cause is accepted, ignoble if another cause is embraced. By this philosophy, death on the field of battle is glorified; death in the act of guiding a man-operated torpedo on its sanguine mission is justified. It is upon this philosophy that men have built the totalitarian state.

The educational practices of the totalitarian state grow logically out of the political philosophy. Educational advantages are not based upon theories of equality of opportunity but upon the basis of utility for the state. A totalitarian state may go so far as to restrict, or even direct, an individual's choice of occupation. The totalitarian state is a planned society, *i.e.* the form of government is planned for the mass of the people. The function of schools is to prepare the young to take their places and act their parts in this planned society. Pupils are regarded as clay to be molded into desirable shape by the teachers. Instruction is given catechismically, by precept. As we should expect, no word was raised in behalf of these educational policies by speakers at the institute on general education.

According to another political philosophy, the measure of a good life should be divorced from those considerations of purpose and utility that permeate the ideals of the totalitarian state. Opposed to the philosophy of collectivism, we have the philosophy that exalts individuality, which means, as Walter Lippmann said in an essay on Amelia Earhart, that "man is no mere cog in the collective machine." Furthermore, this philosophy places human worth in high esteem and calls "good" that life which, to use Lippmann's words again, exhibits "an energy with which men surpass themselves, a fire lighted now and then by great winds from the sky." This is the democratic philosophy which in our Declaration of Independence demands for all men the rights of "life, liberty, and the pursuit of happiness."

When we start to construct a program of education that is built upon a philosophy exalting individuality. we come at last to a common ground held by leaders in general education. Their point of view, however, is not to be interpreted as an emphasis upon the individual apart from society, but, as one speaker expressed it, an emphasis upon "the individual in society." Here briefly, are principles that were endorsed by various speakers:

1. The democratic principle of equality of educational opportunity should remain a primary objective. Such a program follows logically from the tenet of democracy that individuals are of equal worth. We are reminded also that a chance for all pupils to study Latin, trigonometry and ancient history does not represent equality of opportunity since such subjects are of greater value to some than to others. We will have equality of opportunity only when all pupils can pursue those studies that meet their own needs.

2. Guidance should emphasize the whole of life and not merely the vocational aspects. The function of guidance is to decrease haphazard or blind choices while still permitting pupils to exercise freedom of choice.

3. The essence of democracy lies in the fact that the members of such a society engage in the continuous and cooperative process of planning for the welfare of their group. To act as effective citizens in a planning society, pupils should learn to be critical of propaganda but at the same time they must be open-minded toward change. The use of schools for indoctrinating on current issues was condemned; pupils, it was said, should be prepared for change but not for certain changes.

4. Schools should not standardize their pupil product. It was pointed out that our schools with all of their rigidity of administration and uniformity of curriculums are making it difficult for pupils to maintain their individuality.

5. Principles of democratic government are better taught by practice than by precept. The common failure of schools to practice democracy in the administration of their student activities was deplored.

The high school principal at Waterville, Minn., outlines a political and educational philosophy as related to general education, worked out at last summer's institute at the Center for Continuation Study, University of Minnesota.

Unmarried Mothers of School Age

Present Another Task for Teachers in Sex and Character Education

By ENID S. SMITH

TRAINING in sex-character education and in the preparation for daily living, for marriage and for parenthood is urgently needed in all communities. Since public education has not as yet adequately carried out a program of sex instruction and character building, the problem of adolescent unmarried motherhood is increasing.

These unmarried mothers are in most instances of compulsory school age. Pregnancy interferes with their school work, as well as with the general aims of education. The schools may be considered responsible in part for the products turned out.

It Is the School's Problem

Even a cursory glance at the research studies indicates that adolescent unmarried motherhood is a problem of public school education. For example, Bingham in her "Determinants of Sex Delinquencies in Adolescent Girls" found the median age of her group to be seventeen years, three months. Kammerer in his "Unmarried Mother" discovered that 66 per cent of his cases were of girls under twenty-one years of age. Reed in "Negro Illegitimacy in New York City" stated that her largest number of unmarried mothers were between sixteen and twenty. Mangrove in "Illegitimate Birth in St. Louis" mentioned that 45 per cent of 22,765 cases were under twenty-one years of age. Mudgett in "Child Welfare Boards in Minnesota" found that 59 per cent were under twenty-one years of age.

The particular need of sex education in New York City is apparent from Barrett's study of 10,000 cases titled "The Care of the Unmarried Mother." He found that in New York City, where there is no provision made for any program of sex education, 70 per cent of the unmarried mothers are below the eighth grade in school, 25 per cent are in the eighth grade, and 5 per cent are in high school.

Goldberg, in 1935, in his study entitled "Girls on City Streets," states that among 1,400 cases of sex delinquencies the girls were all under seventeen years of age; while at the Home for Unmarried Mothers where I made an intensive case study called "Study of 25 Adolescent Unmarried Mothers in New York City," approximately 96 per cent of the 150 girls who yearly come to the home are adolescents, some of whom are not more than twelve years of age.

Judge Julian Mack, of the Chicago Juvenile Court, writing on the general need for education in matters of sex, says: "What strikes one in Juvenile Court work is the amount of sexual wrong among the very young girls and boys from seven and one-half up; girls diseased at nine years of age; one group of girls of seven and eight, another of thirteen and fourteen, each led by a girl.

Sex Offenders Are Youthful

"Another group of high school girls in a suburban town invited boys to their homes when their mothers were out; another girl seventeen, of most respectable parents, had sexual relations with eighteen boys in the school—one or more other girls involved, and when brought to my attention, many, if not most of the children in the school knowing about it and discussing it, while all the parents were ignorant."

Dr. Rachel Yarros, in "Modern Woman and Sex," after stating that preparation for a normal sex life, biologically and psychologically, must become a part of our general preparation of the younger generation for life as a whole, writes:

"The amount of ignorance on the most elementary facts concerning sex, in a scientific sense, is unbelievable. Thousands of questions and letters of the most naïve nature come from girls and boys of grammar and high school age, who ask the simplest questions about sex phenomena. The more sophisticated college girls and boys alike manifest amazing ignorance in private conversations or in questions at lectures on the subject. In spite of all the talk among educators of integrating sex information with the general curriculum, one is still to find in the hundreds of courses given in our schools and colleges a single attempt in that direction."

Calls for More Than Teaching

Professor Bigelow in "Sex Education" concludes that sex hygiene presented in a common sense way in connection with the regular teaching subjects may be of real value as a preventive agent, but that behind the greatest sexual problems of our times "is an almost universal secrecy, disrespect, vulgarity and irreverence concerning every aspect of sex and reproduction." Furthermore, "with unbounded faith in the all sufficiency of education," he says, "it is natural that we should turn to it in these times when we have come to realize the amazing sexual functions which biologically are entrusted with the perpetuation of life and which psychically are the source of human affection in its supreme forms. In view of the general ignorance on the subject, adolescent girls should be taught the general plan of their own sexual structure and the worthwhileness of chastity."

Gruenberg in "The Teacher and

Sex Education" would also agree with the foregoing, and would add: "There is also, according to the best informed observers and investigators, a large and probably growing amount of sexual promiscuity among certain classes of young people who are sophisticated and too refined to employ prostitution and masturbation for sex expression, but who are not sufficiently trained to make better uses of their impulses."

The American Social Hygiene Association, which constantly emphasizes the need for education along sex lines, considers sex education as a phase of character education. Social hygiene seeks to bring the sex factor into its normal place of appreciative and constructive use in character education; that is the meaning of the rapidly growing movement for "sex education," as it has come to be called in recent years.

Frankwood Williams declares, "The textbooks from which the sexual system is entirely omitted ought no longer to be tolerated. The major amount of nerves and hysteria of the present day may be traced to faulty sexual hygiene." This condition is the result of a lack of sane teaching in childhood, he concludes.

An Essential of Education

The whole child goes to school, not only his intellect, but his emotions, his pleasures, his pains, satisfactions and dissatisfactions. "Consequently," concludes Doctor Wile, "the truths pertaining to sex must not be concealed any longer." In his "Program for Sex Education" he comments: "Society reaps the whirlwind in venereal diseases, unnecessary blindness, insanity, marital infelicity, divorce, desertions and preventable mutilations of men and women. A large part of the burden borne by society can be removed by the wholesome education of the community as to the relation of the social life and the social evils."

Glueck in speaking of the moral guidance of future citizens in "Five Hundred Criminal Careers" says: "Without going into details as to the means of coping with the situation, we can only emphasize the fact that parents need perhaps more guidance toward health, physical, mental and moral life than do their children."

Sex education has been variously regarded as the function of parents, the church and the school. Under ideal conditions, when parents have no inhibitions and have had adequate information and training, sex education can be imparted at such times and in such ways as the intelligence of growing children comprehends. But the number of parents broadly educated are altogether too few to propel a community-wide arising to the needs of childhood. As Beatty, the former superintendent of the Bronxville public schools, points out, general ignorance among parents and adults exists in regard to the basic facts of the reproductive process. "Many," he insists, "are suffering from distorted backgrounds in their own experiences, and do not know how to discuss the matter with their children."

Why Parents Often Fail

Judge Lindsley in his "Revolt of Youth" substantiates Beatty's findings, and concludes: "Parents would do anything to save their children from folly and misery, anything but enlighten them. In many instances, in spite of their greater years of experience, they remain as much at sea as their children, to whom they so carefully bequeath their ignorance."

The function of the church in sex-character education of the young has been accepted as an important consideration, although facilities in modern times are lacking to carry out this charge. Beatty comments: "The church is not equipped to carry forward this instruction even though the sacrament of marriage is bound up with religious sanctions." He mentions two factors that make it improbable that the church will accept responsibility for sex education. Most churches contact children only one hour each week. Into this time they compress the necessary religious instruction of their denominational set-up. Second, only a small minority of children regularly attend church schools. We, then, must turn to the school, the only agency that reaches nearly all the children.

Again, Goldberg notes in his study of 1,400 cases of sex delinquency that, without disparagement of the work of the church, "many of the girls whose tales of woe have been considered, went to church regularly, and despite their attendance came into evil ways."

The school also in many sections of the country is failing to impart sex information. My study of twenty-five adolescent unmarried mothers in New York City and a comparative study of 100 Girl Reserves disclosed that the school had failed to impart any sex information to 100 per cent of the unmarried mothers and to 94 per cent of the Girl Reserves, with the result that 56 per cent of the unmarried mothers were partially or entirely ignorant of the facts of reproduction, and 60 per cent had false ideas about procreation; while 45 per cent of the Girl Reserves were partially or entirely ignorant of the facts of reproduction, and 51 per cent had false ideas about it.

"My parents did not tell me anything about sex matters," is a representative statement of the adolescent unmarried mothers. "My school companions did not tell me the truth about these things. If the school had given us the facts about reproduction we would never have been under this great shadow that hangs over us."

Sex Irregularities Are Frequent

Fifty or more interviews with supervisors, deans and teachers of representative districts revealed that educators in every case were convinced of the need for sex education. Sex irregularity ranged all the way from groups of twenty-five girls practicing homosexuality in school lavoratories —in which case in a certain district a policeman had to be detailed to break up the practices— to school boys who were declared to be the fathers of twelve or more children of girls in certain schools. Obviously, details of the frequent cases in school of pregnancies, promiscuity, sodomy, homosexuality and the like, of which many of the school officials are aware and "distressed" because their "hands are tied since sex instruction is taboo," cannot be printed. Nevertheless, it is education's problem, and is coming to be recognized as such. The White House Conference Report on Delinquency states that because practically all juvenile delinquents are of school age "the school is intimately involved in the entire problem of delinquency."

When Has the Pupil Failed?

By H. M. LAFFERTY

THE influence of the public school system in the production of an educated citizenry has long been recognized. In the development of education a gradual shift has been noted away from individualism as conceived in our theory of democracy to a position consonant with present economic interdependence. This new concept of social conformity has resulted in our public schools becoming marts of training. American liberality in enabling secondary education to become the right of the masses rather than the heritage of a fortunate few; the increasing stringency of school compulsory attendance laws; the increasing complexity of our socio-economic order as a result of new, scientific inventions; the greater selectiveness in employing new workers in business and industrial concerns; the need for high school preparation, and in many instances, college training, to satisfy the rigid entrance requirements of technical and professional schools and colleges—all have elevated the public school system to a new position of prominence.

Checking Up on Waste

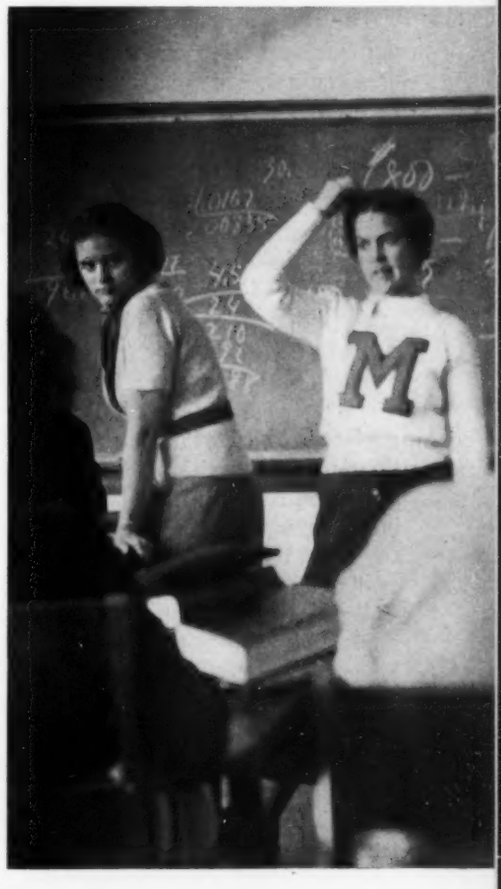
Proof of the importance of education as an institutionalized function, and proof of the increasing heterogeneity of the public school population can be offered in several ways: (1) the numerical increase in school population; (2) the increased institutional cost; (3) the extension of the school year; (4) the percentage of children of school age now in school attendance; (5) the increased holding power of the school; (6) the decrease in the utilization of child and adolescent labor in industry.

Since education has risen to such a position of importance, it is logical that the public should demand more accurate and stringent accounting of school costs, of internal adjustments and of the waste product annually turned out in our elementary and secondary schools. In recognition of such demands and in keeping with its "big business" status, it is imperative that the public schools emulate other large enterprises by employing complete and rigorous checking methods for achieving greater efficiency. Where industry functions largely with monetary or other intrinsic values as a goal, the public schools concern themselves with an infinitely more valuable item, individuals at the most plastic and most impressionable stage in life. Consequently, during this developmental period faulty craftsmanship on the part of the school may produce results ruinous to a subsequent happy and successful life for its charges.

Since the advent of the twentieth century, numerous studies have revealed the extravagant waste annually produced in public schools. For want of understanding ejected children have been referred to as failures. Classification of a failing pupil as unfit or incapable of completing the prescribed requirements of a subject or a grade often results in a serious and unfair condemnation of school misfits. Failure in a subject tends to deaden, disillusion, and defeat the child. In questionnaires submitted to teachers and pupils concerning the causes of pupil failure the teacher consistently ascribes "lack of ability" as a predominating factor in nonpromotion, while the actual failing pupil admits "laziness" or "dislike of teacher" as the primary cause, a reason carrying with it implications aiming at undesirable teaching qualities. At the same time the pupil sees to it that "lack of ability" is given an insignificant position in the list of constituent causes.

One View of Failure

The term "failure" as used in school carries with it many connotations. A pupil may master satisfactorily the prescribed course of study leading to high school graduation and still be unable to make congenial and satisfactory adjustments in the socio-economic situations confronting him after leaving school. Irrespective of where the fault lies, the fact remains that the pupil has failed to become the negotiable social entity that by rights of capacities and abilities he should have become. Again, a pupil on the basis of standardized measurements may be destined for scholastic honors, and yet in the actual classroom situation this pupil may be doing work that is on a lower level than



As an instructor in education at Schreiner Institute, Kerrville, Tex., the author has made a study of pupil failures. He concludes that many cases are the results of faulty craftsmanship in education and reveal extravagant waste.

the standard of achievement being met by average members of the class. Whether the school, the individual, the home, the community or any number of possible factors or any combination of such factors is at fault, is irrelevant. In the sense that the pupil has not attained the maximum development of his native interests, capacities and abilities—the goal that the modern public school sets up for its every charge—that pupil has failed.

In both instances recounted the pupil would be classed as having failed. Certainly the resultant product is antagonistic to the aims and objectives of a progressive school program. Actually, however, such instances do not presage failure according to the criterion employed by pupil personnel accounting systems.

The customary method of defining pupil failure is to consider as "failures" only those pupils whose achievements in a particular school subject at the completion of a semester or a grade are so unsatisfactory as to necessitate a repetition of the work. Such a definition assumes that (1) mastery of sheer subject matter is the chief goal of the learner, and (2) presentation of sheer subject matter is the principal function of the school.

The limitations of such an interpretation of the term "failure" are obvious. Nowhere in such a definition is there provision for the resultant growth in pupil experiences during the semester's program of studies to be measured, recorded and evaluated. Failure, curriculum specialists say, is a stultifying word, implying a total lack of development. Since a child can easily garner a wealth of worthwhile, satisfying experiences and still not be able to satisfy traditional standards prescribed for subject or grade promotion, this assumption does not hold true. To classify as a failure a pupil who has failed a grade or a subject, but who has made worthwhile experimental progress is to do the child irreparable wrong. Such a classification concentrates the foci of attention upon grade or subject mastery rather than upon the acquisition of socialized experience.

While it is admitted that, as yet, no satisfactorily reliable measurement of the "social experiences" has been offered that will supplant the older, more objective criterion of pupil progress—subject or grade advancement—even the most confirmed of child accounting supporters admit that a terminology that would recognize experimental development would reflect much more adequately the conceptual interpretation of pupil "individualism."

The tempo, the very nature of the present system of public school education are no longer the tempo, the nature of the public schools of twenty years ago. Proof of this change in educational philosophy lies in the submergence of the doctrine of "subject matter for subject matter's sake," and the emergence of the doctrine of pupil interests, capacities and abilities; the elevation of the individual pupil to a position drawing the concerted attention of teachers, nurses, doctors, dentists, psychologists, psychiatrists and guidance counselors, and the relegation of adult domination and censorship to the scrap heap.

With the public schools presenting an educational program extending from the nursery school to and through junior college; with the general public showing more concern over the establishment of workable educational policies than ever before; with the handicap put upon the pupil who fails, and with the adoption of a more dynamic, a more organic philosophy of education, a vast new problem has presented itself—the problem of determining when a child in school should rightly go on record as a pupil failure.

Wanted: More Supplementary Readers

By C. S. CHAPPELEAR

BOARD members are usually more willing to talk in terms of production, cost of production, overhead and other expressions from the business world than in terms of norms, medians and percentiles. This is easily understandable.

Tell a board member that an increase of 5 per cent of the costs of his personal business might double or triple his production and he will think you are off in the head. Prove your point and he will readily approve your plan. To a large degree the amount of intelligent reading a child does in the elementary school is comparable to production in industry.

In a vast majority of schools the limiting factor in reading instruction is the available supply of appropriate supplementary books. In many schools the better groups of the first grade classes read from thirty to forty books in the year. It does not take exceptional teachers or superior children to read twenty or more books in each of the lower grades, when attractive well-illustrated texts are available.

The cost of educating each child in the United States is $85 annually. An increase of 5 per cent on this amount will enable a board to add more than $100 worth of supplementary readers and library books annually for each class of twenty-five pupils. This would make it possible not only to double the amount of reading ordinarily done but also to increase it from five to ten times in many instances.

It is difficult to estimate the value of facility in reading. This is almost invariably associated with a broad educational background. The two are achieved simultaneously.

Good reading habits, based on wide reading, are best established in the elementary grades. Every educational advantage that comes from reading facility can be used in urging the expenditure for supplementary readers.

Members of boards of education can be convinced of the wisdom of adding library books and supplementary readers to the school equipment when the subject is presented to them in a reasonable and intelligent manner. The tremendous increase in productive reading for a small investment makes a strong appeal to the board members.

Flexible or Traditional

Which Will Your Classroom Interior Be?

By J. L. TAYLOR

THE school activity program is based upon a philosophy having the same characteristics of freedom, responsibility and control as organizations and institutions of a democracy.

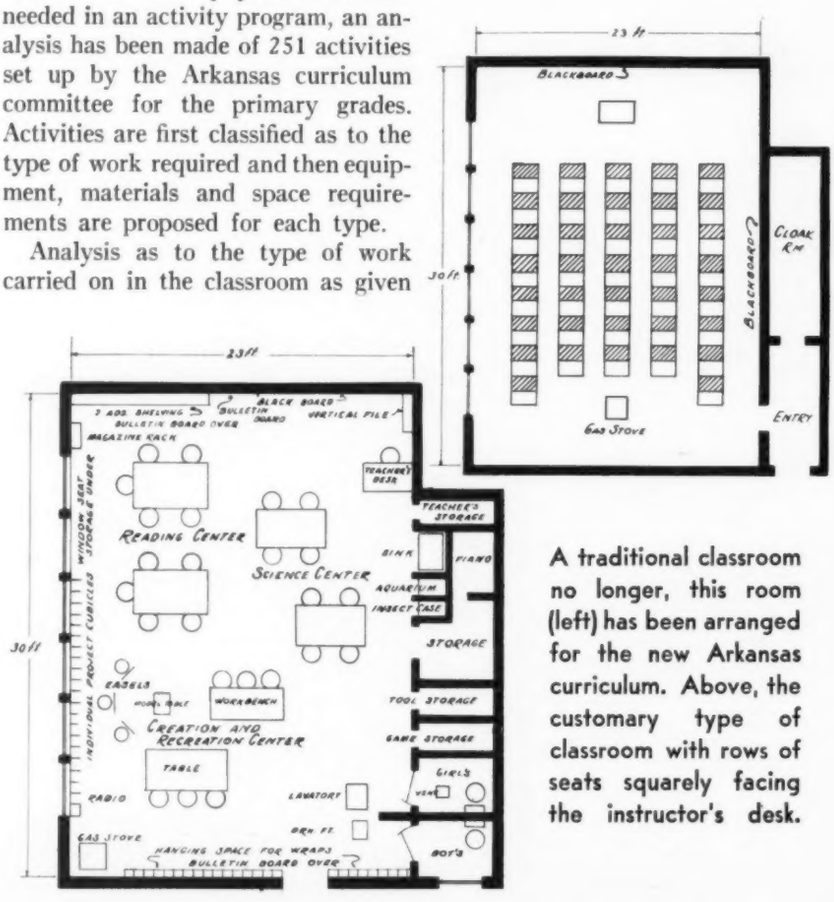
Since a democratic atmosphere is to be sought in the classroom, life situations must be met. Books, even though they reflect the heritage of the past, have limitations. Activities should bring a great number and variety of experiences to the children, and should be included in the curriculum under direction of a teacher. The school program, then, must do more than provide experiences in reading, listening, drill and discussion. The activity program, with a wider and more varied experience for the child, cannot be carried on efficiently in the traditional classroom.

To determine physical facilities needed in an activity program, an analysis has been made of 251 activities set up by the Arkansas curriculum committee for the primary grades. Activities are first classified as to the type of work required and then equipment, materials and space requirements are proposed for each type.

Analysis as to the type of work carried on in the classroom as given in Table I reveals only two types of activities in the new program common to the traditional program—discussion and reading. This type of program requires a classroom to accommodate activities largely new to the Arkansas program. In 41 activities the children make trips and collect materials that must be stored and exhibited. Table I also shows 17 activities that pertain to painting, modeling and weaving, and 16 to map and chart making. Fifty activities, or 20 per cent of the 251 activities, are creative. Dramatization and recreation also have significant places in the new school activity program.

TABLE I—PRIMARY ACTIVITIES CLASSIFIED ACCORDING TO WORK

Type of Work	*Number of Activities*
Field trips, excursions and observations	41
Construction of material things	17
Discussion	19
Painting, modeling and weaving	17
Reading	16
Chart and map making	16
Recreation	14
Dramatization	10
Booklet making	11
All other activities	90
Total	251



A traditional classroom no longer, this room (left) has been arranged for the new Arkansas curriculum. Above, the customary type of classroom with rows of seats squarely facing the instructor's desk.

The new program is a flexible one. The new facilities, therefore, should be planned and selected with the new program in mind.

An attempt to determine the physical facilities needed in the activity program is made by setting up equipment, materials and space requirements for each type of work or experience. The needs vary, depending on the nature of the work involved. Some of the activities require open floor space while others require chairs and tables arranged in formal groups.

Since field trips, excursions and observations are emphasized in the new program, a great number and variety of collections are brought into the classroom for storage and exhibition. Construction and creative activities are making demands upon the new classroom not common in the traditional program. Children not only demand room to saw, hammer, measure and paint without interference but also need equipment and materials accessible at all times.

By analyzing each type of work

listed in Table I in terms of equipment, materials and space, a composite list of each has been made as shown in Table II. The list of equipment indicates that only 13 items, or 28 per cent of the total number, were needed in the traditional classroom. The materials' column includes only 13 items, or 26 per cent of the articles required for the new curriculum. A further study of this table shows that space becomes an important problem in planning a classroom for the new curriculum. Of the 30 items for which space must be provided only 4 were essential for the traditional room.

The analyses have indicated that: (1) the new classroom should be designed to take care of a program consisting of a much greater number and variety of activities, (2) classroom physical facilities should be similar to those of the average home, (3) an increase in equipment, materials and space is needed. The classroom must take on the appearance of a workshop one period; a gymnasium, the next, and a theater, another. Such periodic shifting of scenes demands a flexible classroom. This problem can be solved by dividing the classroom into four centers in which equipment, material and storage are peculiarly fitted to accommodate certain types of activities.

An attractive well lighted corner of the room may be known as the reading-discussion center. It should be equipped with reading tables, a reading lamp, movable chairs, charts, pictures, bookcases or shelves, all attractively arranged. The center must be large enough for the children to work individually, in small groups and in large groups. Other equipment may be brought into the center when needed but it should be known and designated as the library or reading center.

Another corner might be called the creative center, where charts, maps, booklets, rugs, bird houses and other things are made. It is the workshop of the room. Such equipment as work benches, easels, vises, paper cutter and scissors, and such materials as lumber, nails, glue, sandpaper, boxes, straw, raffia and paint should be available when needed. That materials and equipment may be stored in a systematic way, provision must be made for cupboards and cabinets of the built-in type. This center, if properly arranged, has unlimited possibilities for primary children to initiate and experiment in various creative fields.

The science-nature study center is one of the most important in the new classroom. The emphasis given field trips in the 251 activities referred to in Table I will result in many specimens being brought into the classroom for study and exhibition. The equipment in the center, then, must include such things as exhibit cases, aquarium, pet cage, mounting cases, built-in cupboards, cabinets and files. A great variety of instructional materials may be used in this center such as pets, bugs, fish, birds, rocks, flowers and plants.

The recreational center should accommodate such activities as dramatics, games, music and social hours.

Equipment and materials needed in this center are a temporary stage,

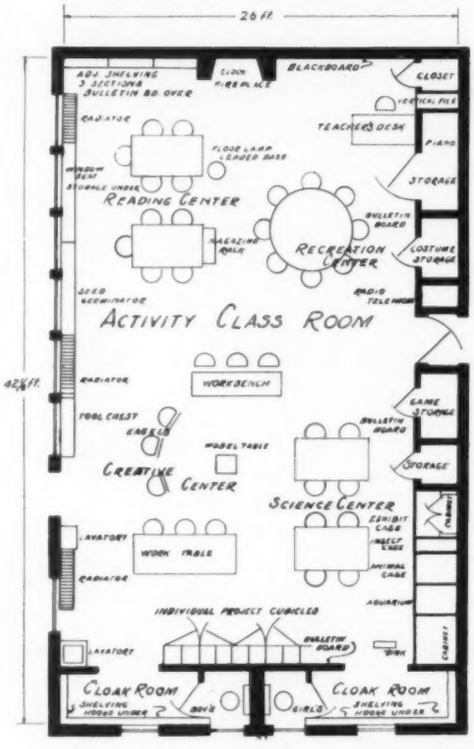
TABLE II—SUMMARY OF EQUIPMENT, MATERIALS, AND SPACE NEEDED IN ALL OF PRIMARY ACTIVITIES

Equipment	*Materials*	*Space*
1. Movable chairs	1. Cage	1. For large and small groups*
2. Tables	2. Net	2. Tables
3. Exhibition cases	3. Specimen kit	3. Movable chairs
4. Cabinets*	4. Basket	4. Cabinets
5. Aquarium	5. Mounting pad	5. Exhibition cases
6. Bird houses	6. Bucket	6. Nets
7. Work benches	7. Nails	7. Kits
8. Saws	8. Paste	8. Pads
9. Hammers	9. Lumber	9. Buckets
10. Rulers*	10. Hinges	10. Cages
11. Clamps	11. Brackets	11. Bird houses
12. Vises	12. Sandpaper	12. Aquarium
13. Brace and bit	13. Boxes	13. Shelves*
14. T-square	14. Paint	14. Tool box
15. Drawing board	15. Paint brushes	15. Work benches
16. Sink	16. Soap	16. Sink
17. Blackboard*	17. Pencils	17. Bulletin board
18. Bulletin boards*	18. Pictures*	18. Files*
19. Easels	19. Charts*	19. Easels
20. Scissors*	20. Birds	20. Space to saw, hammer
21. Screens	21. Animals	21. Charts*
22. Shelves*	22. Objects*	22. Large cardboard
23. Filing cabinets*	23. Pets	23. Small cardboard
24. Paper cutter	24. Insects	24. Cupboard
25. Cupboard	25. Clay	25. Playhouse
26. Lockers	26. Paper*	26. Lockers
27. Temporary stage	27. Water	27. Space for play
28. Simple stage furniture	28. Straw	28. Stage
29. Stage scenery	29. Cardboard*	29. Screens
30. Waste basket*	30. Colors*	30. Scenery
31. Emergency illness equipment	31. Books*	
32. Seat equipment	32. Printing materials*	
33. First aid kits*	33. Crayons*	
34. Physical test apparatus	34. Cards*	
35. Water facilities	35. Travel folders	
36. Duplicator	36. Catalogues	
37. Printing sets	37. Rulers*	
38. Card cutter	38. Building blocks	
39. Pencil sharpener*	39. Play house	
40. Rubber stamp*	40. Balls*	
41. Punch	41. Bats*	
42. Typewriter	42. Dolls	
43. Compasses	43. Doll furniture	
44. Erasers*	44. Toy money	
45. Axe	45. Costumes	
46. Calendar	46. Make-up	
47. Mirror	47. Toys	
48. Stepladder*	48. Pamphlets	

*Would be needed even in traditional classroom.

stage scenery, screens, a musical instrument, books, costumes and games. The center will often demand more space, to be had by shifting the movable furniture.

The centers described above are proposed for fitting the equipment and materials into the classroom and for putting the diversified program into operation. Since the furniture is movable, there will be occasions when the whole room will be used for



Activities are grouped around tables and cubicles give privacy for individual projects in this primary classroom, which has plenty of storage space.

certain activities. Movable furniture not only makes better teaching situations and protects the health of pupils, but it is less expensive than fixed desks and seats.

A strong posture chair with a saddle seat and a horizontal slat back that gives good support is recommended for hard usage. Tables should be strong and sturdy. Tables for use with 12 or 14-inch chairs should be 10 inches higher than the seat for most first and second grade children.

Since storage demands are five times as great in the activity program as in the traditional, it is essential that built-in cabinets and cupboards be provided in each center for general class materials. In the traditionally built classroom, children kept books, papers and pencils in their desks. In the new set-up, desks have been discarded and materials have increased. Children must, therefore, have individual storage space so that their materials always will be in place. Built-in cubicles, 12 by 12 by 18 inches, should be provided for each child. This will provide for all his personal materials and furnish an opportunity to teach the importance of putting away materials systematically.

This plan of built-in storage conserves floor space and helps preserve supplies and teaching materials that may be used a number of times.

Exhibition of specimens and other collections as well as construction samples makes it necessary to provide such equipment as bulletin boards, exhibit cases and an aquarium. Bulletin boards should replace much of the blackboard of the traditional room. The bulletin boards should be made of cork and placed in every center as low as from 24 to 28 inches from the floor.

Frank M. Long's study revealed that there should be an increase of from 20 to 25 per cent of floor area in the activity school over the traditional standard. A floor area of 920 square feet would then accommodate forty-three pupils, but it is recommended that the number be not more than forty, and preferably less. The floor area should be increased to meet the needs of the activity program and not additional pupils.

Ventures in Cooperative Education

By FRANCIS L. BACON

THE real challenge to our professional growth, the active opportunity for educational progress lies in a general participation in the creation and control of our educational program. A few significant problems need selection for a cooperative attack. The background of these problems calls for analysis and study in order that basic understanding may be established. Analysis, understanding, interpretation rest upon adequate discussion by many small, actively participating groups. Discussion will not bring conclusive interpretations, satisfactory understandings or desirable actions unless it is persistent, controlled, planned and continually held to a specific problem until cooperative agreements have been reached.

There is a general need for some device that will permit the participation of larger numbers of persons in the formulation of educational policies, the solution of problems and the direction of educational movements. The growth of discussion groups and the development of skill in discussion techniques are essential to the success of many present day movements in education. The progress of new programs of education is hindered because no extensive means has been developed to help members of the profession clarify their thinking on new proposals and apply them to local situations.

Discussion groups are really miniature ventures in cooperative education. It is necessary to see experiences from different points of view in order to show situations in which various interests are at stake. This is one of the significant contributions of group discussion. Each member has his special sensitiveness to considerations that the others would slight or overlook. Together they form a little cross-section of the current thought on the situation.

The department of secondary school principals of the National Education Association has formulated plans for a coordinated program for discussion groups throughout the country. Such a program in which various groups will be working on common problems which demand united action should contribute to the wider understanding of these problems, should bring about experimentation and investigation and thus influence school procedures and ensure greater participation of the rank and file of the teaching profession.

Pictures and Public

By GEORGE A. STRACKE

One of a weekly series of photographs that have been appearing during the last three years in the Flint (Mich.) Journal. It deals with a feeding project of one class in the Zimmerman Junior High School.

PICTURES as a medium in interpreting the work of the schools to the public are receiving more attention from visual-minded school men. In 1937 three large school systems issued pictorial surveys, a testimony of the value being placed upon this method. A profusely illustrated superintendent's report is ideal, but few systems can afford such an expense. How, then, can they put interpretive pictures before the public?

Several possibilities, in general inexpensive, are open. The high school yearbook provides opportunities too often overlooked. The annual staff may be encouraged to include a section portraying the school's educational activities. This section should, as far as possible, include pictures from classrooms in every department or curriculum. Yearbooks are retained as a family treasure, and in families of more than one child, sections of a series of yearbooks readily reveal the improvements and changes.

Reuse of Yearbook Engravings

After the yearbook has been printed, the engravings from this section may be used to illustrate the superintendent's report. If there is more than one high school in the community, a selection can be made from yearbook illustrations of all schools so that all sections of the community may be represented in the report.

It is a practice in some school systems to publish informative pamphlets about curriculum offerings, courses of study and guidance material. These also may be illustrated with plates from school annuals.

Getting Pictures Into Homes

Photographs of educational activities made for reports, records, teacher-training and similar uses lend themselves readily to public relations uses. Children who appear in such pictures or who have participated in the activity are eager to obtain prints. In the public schools of Flint, Mich., requests for as many as forty prints of a single picture are not unusual.

There is no better means for getting pictures into the homes. This opportunity to bring classroom activities to the attention of the parents should not be overlooked. While the detail of making the arrangements for the extra prints may seem burdensome, the results justify the effort. Parents who are diffident about attending the P.-T.A. or visiting the school take pride in feeling that their children were important enough to be in an official picture. While it is impossible to furnish prints free of charge, the cost to the pupil should not be prohibitive. Another precaution should be made — children and teachers should understand that there is no "sale" of pictures and under no circumstances should children be urged to buy.

Who is to take these pictures if the system does not have a department of visual education or similar agency equipped to take photographs? Even a small school system has on its faculty at least one camera enthusiast. Often these amateur photographers own equipment; if not, satisfactory equipment is not expensive. Given a supply of materials which may be purchased along with the regular school supplies, some instructions as to the type of picture desired, and the opportunity in time allowance, this teacher's photographic results will more than justify the outlay. This procedure is recommended even when the public school system may be able to afford the services of a commercial photographer.

The teacher will be a familiar figure; being acquainted with educational objectives and procedures, he will make pictures that will tell the desired story. Once the negative is

A program of social interpretation, through the medium of published photographs and motion pictures, may be planned at little expense by following some suggestions offered by the visual education specialist of the public schools of Flint, Michigan.

Work for every little hand. These children of Dort School, Flint, Mich., are in the beginning stages of an extensive grocery store project.

obtained, duplicate prints can be obtained in quantities from a commercial photographer. The practice of having the duplicate prints made by "camera" clubs is not desirable and is not recommended. Antagonisms aroused by having the pupils "go into the business of selling pictures" will often more than offset the advantage gained in price.

Newspapers afford another means of getting pictures of valid educational procedure before the public. Photographs of extracurricular activities will serve as an entering wedge if newspaper picture contacts have not already been made. If local newspapers are not using school pictures, it may be suggested to the reporter covering school news that arrangements can be made for a picture to accompany some school news item.

Handling News Photographers

Newspaper photographers are brusque, always in a hurry and interested in a "news" picture that frequently does not fit in with the educator's idea. Disagreement on this point has brought about unsatisfactory relations between many educators and the press. The wise administrator will bide his time until he has established the confidence and friendship of the news photographer. Once this confidence is established, the photographer may be asked for suggestions for bringing out the idea the educator wishes to convey. The result will be pictures of fine interpretative value.

In a system so large that the administrator or an assistant cannot accompany the news photographer, teachers and principals should be impressed with the fact that all possible courtesies should be shown the news photographer and that the value of the resulting picture in the newspaper will often more than offset the inconvenience of a disrupted schedule. Failure to learn this lesson has been the unfortunate experience of some public school authorities.

While it is true, according to an old proverb ascribed to the Chinese, "that a picture is worth a thousand words," no picture should appear in the public press without an accompanying explanation or an article. One field for the use of pictures remains practically untouched. From the collection of school pictures a comprehensive selection should be made for lantern slides. These can be used for the focal point of discussions before luncheon clubs, the P.-T.A., church groups and other lay and civic organizations. Vitalized discussion should prove infinitely more valuable and instructive in interpreting the schools to the public than the dry-as-dust statistical presentation frequently delivered.

Making Movies at School

A new interpretative practice is the manufacture of school motion pictures. Leaders in this use of the motion picture are the school systems of Los Angeles and Detroit. A number of smaller school systems also have accomplished fine results in this field.

The motion picture offers three principal advantages — the pictures are dynamic rather than static, action brings out an idea much more vividly, and a more spectacular method of telling the story is afforded. Motion picture films are not much more expensive, considering the results obtained, than still pictures. However,

proper equipment is expensive and requires greater technical experience of the photographer. This is not, however, an insurmountable difficulty. If the school faculty does not include a motion picture enthusiast with 16-mm. equipment, often a local resident who owns equipment is more than willing to show off his talents in this direction.

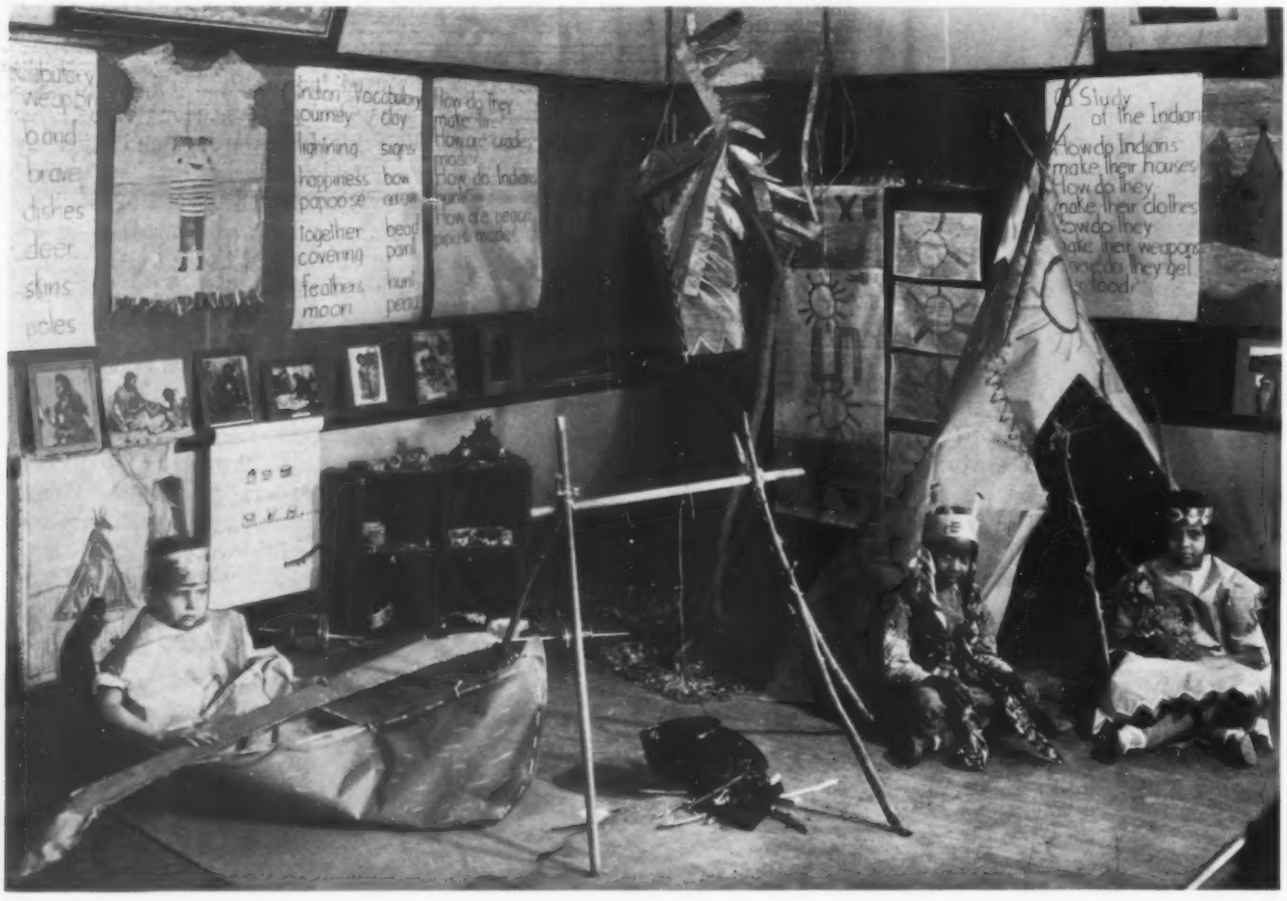
Whether the pictures are still or motion pictures, some definite points must be observed in their production: (1) the picture should have a focal point of information; (2) pictures should be unposed; (3) only actual teaching situations should be portrayed; (4) details should be large enough that the idea is readily understood; (5) pictures should not be limited to one type or activity, since the audience may get the idea that only one subject is taught; (6) the entire system should be covered over a period of time — all grades, all subjects, all schools, and (7) the practice of borrowing photographs should be avoided.

Don't give the impression that only the best people attend your school; the audience knows better. Many elections are swung by a "slum district" vote. A planned program of comprehensive coverage will develop friends in totally unexpected places.

A bath follows the gymnasium period in a New York school. (Photo from "All the Children.") Below, pupils at Clark School, Flint, Mich., learn about primitive peoples.

In addition to the foregoing points, motion pictures require attention in the following details. A careful synopsis of scenes, script and scenario should be worked out before a single "shot" is made. Each action should be rehearsed and a full explanation given to the children about what you are trying to accomplish. On the other hand, do not attempt to "stage" a production. While balance, composition and lighting are important considerations in both still and motion pictures, trick shots and odd angles should be studiously avoided, as the audience is likely to miss the story in giving their attention to technique.

Titles should be adequate, should remain on the screen long enough for even the slow readers to comprehend and should appear frequently enough to amplify the story. Familiarity with the story often results in too few and inadequate titles. The reel should be previewed by a stranger for continuity before being released.



"You Can't Come to School"

Declares the State to Certain Pupils

By M. M. CHAMBERS

The privilege of school attendance may be denied upon three scores: health regulations, nonconformity with patriotic rituals and mental inability to profit from the type of instruction offered. Legal background for each instance is cited by the author, an authority upon school law.

THOROUGHLY committed as we are to the principle of free and compulsory education, and strongly as this tends to establish a fundamental right of school attendance, the fact remains that there are many circumstances in which the school authorities may lawfully exclude an eligible pupil. These situations arise from two causes: (1) boards of education have no choice but to obey the statutes of the state, and (2) they must always have power, implied if not expressed, to make reasonable rules for the discipline, health and orderly progress of the pupils, and enforce them by expulsion when necessary. Some recent cases in this field are of interest.

Many decisions in state and federal courts have firmly fixed the rule that the state may require vaccination against smallpox as a condition of school attendance, and that those who refuse to comply with this requirement may be lawfully excluded. Moreover, the parents of such children may, of course, be prosecuted and penalized under the compulsory education statutes if they fail to send them to some suitable school. All this is so generally accepted nowadays that it is somewhat surprising to find a case reaching the supreme court of New Hampshire, wherein the conviction of a parent for failure to cause his eight-year-old son to attend school under the foregoing circumstances was affirmed.[1] The statute requiring vaccination exempts any pupil holding a certificate from the local board of health that he is an unfit subject for vaccination. This protects the rare individual for whom vaccination is dangerous.

The highest courts of no fewer than three states have passed upon "flag salute cases" within the present year. A New Jersey statute of 1932 requires pupils to salute the flag and repeat the oath of allegiance every school day. The expulsion of two pupils, aged five and seven, for refusal to participate in this ceremony has been upheld by the state supreme court in a curt opinion containing the sentence, "It is little enough to expect of those who seek the benefits of the education offered in the public schools of this state that they pledge allegiance to the nation and the nation's flag."[2]

A Massachusetts statute of 1935 requires the flag salute ritual at least once a week. It provides penalties for school committee members and teachers for failure to comply, but no penalty for pupils.

Nevertheless, this same statute is held to imply the power of expulsion to enforce it, and the exclusion under it of an eight-year-old boy from the public schools of Lynn is upheld by the Supreme Judicial Court, dismissing his petition for reinstatement.[3] This court goes further and holds that the rule requiring the salute would be within the powers of the school committee even if there were no statute on the subject.

In Georgia no statute requires the flag salute, but it is required by a rule of the Atlanta board of education. The state supreme court has declined to interfere in the exclusion of a twelve-year-old girl pupil in an Atlanta school for noncompliance with the rule of the board. The court quotes and approves the New Jersey decision and holds that the requirement of the board is reasonable and in consonance with good public policy.[4]

The three "flag salute" cases are alike in important respects. In each instance the pupil alleged that the compulsory ritual deprived him of religious freedom and liberty of conscience; and each court decided that the salute to the flag is in no sense a religious observance, but is instead a gesture of patriotism and respect for the civil authority, having nothing to do with religious beliefs or forms of worship. In all three opinions reference was made to the decision of the United States Supreme Court in 1934 in the University of California military training case, in which the liberal Justice Cardozo wrote a specially concurring opinion holding that there is no infringement of religious freedom if a state makes compulsory military training a condition of attendance at its state university.[5]

In view of the possible dangers of excessive regimentation and rampant authoritarianism in the schools, it is perhaps unfortunate that all three cases turned upon alleged deprivation of religious liberty and did not in-

[1]State *v.* Drew, (N. H.), 192 A. 629 (1927).

[2]Hering et al. *v.* State Board of Education, 117 N. J. Law 455, 189 A. 629 (1927).

[3]Nicholl *v.* Mayor and School Committee of Lynn, (Mass.), 7 N.E. (2d) 577 (1937).

[4]Leoles *v.* Landers et al., (Ga.), 192 S.E. 218 (1937).

[5]Hamilton *v.* Regents of University of California, 293 U. S. 245, 79 L. Ed. 159, 55 S. Ct. 197 (1934).

volve debate on the wisdom or unwisdom of compulsory mass ritualism as a means of developing good citizenship. Such matters of policy are, of course, ordinarily to be considered by the legislatures and not by the courts. Apparently recognizing that important questions of policy were involved, the Massachusetts court concluded its opinion with the statement that it could not usurp the legislative function by questioning the wisdom of the statute, and accordingly had confined itself strictly to questions of law raised.

Both the New Jersey and Georgia courts also pointed out that individuals who feel oppressed by the reasonable regulations in the public schools are free to seek their education elsewhere. In other words, private and sectarian schools of all grades exist for those who prefer them, and a famous decision of the Supreme Court of the United States holds that a state cannot compel all persons of school age to attend public schools.[6]

Most compulsory education laws exempt pupils who are mentally unable to profit substantially from further instruction. There is a well-recognized public responsibility to care for such children in special classes, schools or other institutions where studies are provided suited to their needs and capacities.

Many cities have established special schools for this purpose. The exclusion of a "borderline" pupil from any public school except such a special school for the handicapped is often a delicate matter, giving rise to the necessity of defining the child's educational rights under the laws of the state. Such a case has recently occurred in Iowa. In Ames there is maintained, as a part of the public school system, an ungraded school enrolling from sixteen to twenty pupils, of which one of the purposes is to provide individual attention for pupils who have difficulty in doing the work of the regular graded schools.

In 1935 the board assigned to this ungraded school a thirteen-year-old boy whose record showed conclusively that he was not making satisfactory progress. His father refused to send him to the special school and was prosecuted under the compulsory education law. The municipal court erroneously acquitted him, because it doubted the power of the board of education to maintain the ungraded school and because the parent was demanding that his child be allowed to attend the regular school. The state supreme court reversed the judgment, showing that the grading of schools is merely permissive and not mandatory upon the board of education, and that a statute explicitly empowers the board to determine the number of schools to be maintained and to designate the particular school which each child shall attend.[7]

In some states the compulsory transfer of subnormal pupils to special schools or classes is provided for by statute. For example, a New Jersey act requires every board of education to ascertain how many pupils in its district are retarded three or more years in their school work; and in each district where there are ten or more such pupils, a special class or classes must be formed for them.

There still remains the question of the exclusion of children so markedly handicapped that they are unable to make substantial progress even in a special class. The methods in use for legally identifying such pupils and the subsequent steps vary widely from state to state. Since their exclusion from any form of local public school is likely to result in their becoming wards of the state in some special institution for their custody and education, it is often argued that some central authority of the state should determine their status in the first instance. This seems to be the case in Ohio, where an appellate court recently held that, in the face of a statute expressly requiring the approval of the state department of education for the exclusion of such a pupil, a local board could not exclude the pupil without such approval.[8]

Thus it appears that at present the privilege of school attendance may be denied to those who (1) fail to comply with reasonable health regulations, which may include compulsory vaccination; or (2) refuse to conform to reasonable rules for the conduct of the school, which may include patriotic rituals, or (3) fail to demonstrate sufficient ability to profit substantially from the type of instruction offered. With respect to these three matters, what will be the next improvements in law and practice in the field of education?

[6]Pierce *v.* Society of the Sisters of the Holy Names of Jesus and Mary, 268 U. S. 510, 45 S. Ct. 571, 69 L. Ed. 1070, 39 A.L.R. 468 (1925).

[7]State *v.* Ghrist, (Iowa), 270 N.W. 376 (1936).

[8]Board of Education of Cleveland Heights *v.* State ex rel Goldman, 47 Ohio App. 417, 191 N.E. 914 (1934).

Replanning the Curriculum

EDUCATORS are assuming that there will be significant changes in secondary education during the next few years. They are assuming that there will be a rethinking of the objectives of the secondary school in terms of the functional needs of present-day life; an adaptation of instruction to the abilities, achievements and interests of the individual pupil; an emphasis upon self-direction and upon the ability to solve new problems as they arise. If such changes are to take place, there is need for a method of approach to curriculum planning whereby pupils and faculties may proceed with confidence toward the discovery of this better pattern of learning.

The basis for replanning of the curriculum may well be a systematic study of the needs of individuals as they live in the relationships of community, family, vocation and personal life. These needs may be studied systematically and objectively by faculty and pupils. Pupils may become research workers. In schools in which this procedure has been followed, pupils have clarified their goals and objectives. They have been able to plan for more economical and effective use of school time. They have taken more interest in their work. They have been able to appraise their own growth and to profit from a knowledge of their own successes and failures.—*By Kenneth L. Heaton, Director of Division of Curriculum Research, Michigan Department of Public Instruction.*

The head of the social sciences in the Jenkintown School District, Jenkintown, Pa., instituted a self-grading experiment into a senior high school class.

They Grade Themselves

By H. C. LANKS

PUPIL self-grading in the social studies was instituted in the Jenkintown School District of Jenkintown, Pa., as an experiment with a two-fold purpose. First, it was believed such an experiment would be a fertile field for inculcation of responsibility, objective thinking and of fairness in human relations, at the same time touching frontiers of democratic relationships. The possibility of eliminating the classroom teacher from the painful and sometimes futile attempt at fair grading was a second consideration.

The discussion method of teaching formerly had been used. The class on which the experiment was tried was a twelfth-year group in social problems, in which economic factors were emphasized. Current events formed an important basis for class discussion. A basic text, a weekly paper and wide reading were a part of the assignments.

Pupils were permitted to know that they were being observed for originality and clarity of thinking. Freedom and informality in class discussions were encouraged, with the teacher acting merely as a referee to keep discussion to the point.

At times pupil discussion was permitted to run uninterruptedly so that pupils might bring out points of emphasis and new contributions. The instructor refrained from interjecting himself into the discussion any more than was necessary. He formed individual daily judgments and at the end of the report period averaged these together for a grade. An objective examination also was given at the end of the period and averaged with these reports.

The experiment in self-grading was conducted in the following manner. Each pupil was given a mimeographed alphabetical list of all names in the class and then told to strike his own name off the list. Then the pupils were instructed to decide upon the ranking of each member of the class except themselves.

To avoid error and to facilitate judging, the pupils were told to write their rankings on another sheet of paper, checking off each name on the mimeographed list as it was written down. This method avoided duplication and provided for the judging of each pupil individually. The names in the written list were numbered consecutively, and the numbers placed after the corresponding name on the mimeographed list. The ranking numbers after each name were then summed.

The teacher's grades for the same report period were arranged in order of each pupil's accomplishment. When differences were close, daily grades were examined more carefully. The teacher's set of numerical rankings, then, was comparable to the pupil average rankings described above.

Correlation between the grades determined by the pupils and the teacher was obtained by comparing the teacher's grades with the pupils'

rankings. In the first report period the teacher distributed grades as follows: one A, ten B's, eight C's and two D's. From pupil numerical rankings letter grades were allocated on the same basis, the highest pupil ranking being called an A, the next ten, B's and the next eight, C's. The coefficient of correlation was worked out for these comparisons. In some cases correlations were higher and in some cases lower than pure numerical rankings.

On a probability curve basis for both pupil and teacher numerical ranking, grades were distributed as 7 per cent A's, 24 per cent B's, 38 per cent C's, 24 per cent D's and 7 per cent failures. Because the class was small these percentages could only be approximated and were described as follows: two A's, five B's, eight C's, five D's and one E. So the first two of the teacher numerical rankings for each report period were called A's and the next five, B's. This was done similarly with pupil numerical rankings. Naturally the coefficients of correlation for these comparisons are less because of the greater number of arbitrary factors involved.

Significant results were found in comparing numerical rankings for each marking period. Here finer measurements were possible. The coefficients of correlation in these cases were striking, being .68 for the first period, .75 for the second period and .95 for the third period. The average for the semester was .86. This correlation was so high that there appeared to be collusion between pupils and teacher, unconscious if not purposeful. Yet this was impossible.

Toward the end of each report period and before the teacher had averaged his grades, the pupils took half a class period to make their decisions. The pupils did not see the teacher's grades, as they had not yet been averaged. On the other hand, the teacher did not see the final pupil averages until he had finished his grading, when the pupil committee submitted findings of the class. This procedure was duplicated for each report period. Undoubtedly improvement in correlation as the experiment proceeded was due in great measure to increased familiarity of the pupils with the aims of the teacher and the measurement procedure.

Although the correlation between the grades assigned by pupils and the teacher was more erratic, they, too, showed an increasing correlation as the experiment proceeded. The more erratic nature of these correlations is probably due to the small number of cases as compared to the size of intervals.

This experiment has indicated to us the possibility of pupil ranking. It seems that such rankings may safely be used in determining pupil grades. Of course there are many factors that would have to be considered in determining how far this should be carried. The type of pupils that make up a class is an important factor. In this case it happened that we had a fairly select group of responsible pupils. Another important factor is the psychological attitude of the class at the time the experiment is made. Whether or not the administration or community is willing to accept this delegation of teacher responsibility to the pupils also is to be considered. It is questionable that such a practice would lighten the burden of the teacher as the procedure takes time. Yet it offers the teacher a means of checking the objectivity of his grades and this is valuable in itself. Above all, in this particular class of social and economic problems, it offered the greatest instrument for inculcating some of the habits and attitudes that are the objectives of the class: fairness, consideration of others and orientation of self.

Rehabilitation Headquarters for Toys

CHRISTMAS draws school and community more closely together than any other season in many school districts. In an increasing number of localities there is an exchange of service between public school and community Christmas activities. One way in which pupils may participate is in painting and repairing toys. From their homes, the children bring toys no longer being used and they are rejuvenated in the school workrooms. They are distributed to needy children through the community center.

Supervisor in Common

By FRANCES GIDDINGS

How coordinate supervision of teaching worked out between a California union school district and neighboring schools in Mendocino County is told here by the supervisor in charge.

RECOGNITION of the need for intensive supervision led the superintendent of a union school district and the county superintendent to conceive a plan of coordinate supervision for the schools in the union school district and neighboring schools in the county. The schools coming under the coordinate plan of supervision are the nineteen school districts within the Fort Bragg Union District and the neighboring schools in Mendocino County, California. The grammar schools that serve the Fort Bragg Union School District are located at the two-teacher schools of Ocean, Westport, Leggett Valley and Noyo, and the twelve-teacher school at Fort Bragg.

The neighboring county schools included under the plan are the one-teacher schools of Camp Nineteen, Ten-Mile Emergency, Riverside and Navarro Ridge; the two-teacher school at Caspar, and the four-teacher school at Mendocino. A supervisor was employed to give three days each week in Fort Bragg grammar school, as vice principal and supervisor, and two days in adjoining districts and county schools as kindergarten-elementary rural supervisor for Mendocino County.

The children, ranging from kindergarten through the eighth grade, represent an average public school group including Indians, Hawaiians, Chinese, Germans, Russians, Portuguese, Italians, Finns and Scandinavians. For the most part these children are removed several generations from the land of their forefathers.

Objectives Are Mapped

The supervisor's first problem was to outline the objectives for improvement of classroom instruction. The following list was prepared:

1. Provision of reference books for teachers and supplementary books for children.
2. Formulation of new report cards.
3. Interpretation of suggested state courses of study adopted by the county where they will be taught.
4. Use of new state-prepared texts.
5. Interpretation of a social science program, selection, initiation and types of experiences.
6. Improvement of the physical environment of classrooms.
7. Improvement of reading by emphasizing techniques corresponding with different purposes of the reader.

In accomplishing the first four objectives the supervisor was aided by the administrative activities of the county superintendent and the superintendent of the Fort Bragg Union District.

Reference books for teachers and supplementary books for children were provided by installing a circulating library for county schools and by organizing a central library for the Fort Bragg Grammar School.

Shares Circulating Library

For the use of the circulating county library, each district contributed $10 to which the county added $5. The books purchased were selected from the suggested lists arranged by the two rural supervisors and the coordinating supervisor. These books included poetry collections, reference books on nature, social science and supplementary recreational reading books for all grades from the first through the eighth. A variety of books of interest on each grade level, representing the same purchase value, were placed in large wooden boxes of uniform size. These boxes were exchanged from school to school on the first day of each month.

All of the schools under the coordinate plan of supervision subscribed to the circulating library with the exception of the Fort Bragg Grammar School the needs of which were different from the one and two-teacher schools. In this school the superintendent of the Fort Bragg Union District ordered many reference books for teachers, and informational and recreational reading books for the children, books which formed a nucleus for a central school library to be used by both elementary and junior high school pupils. A junior high school teacher with library training was given a lighter teaching assignment and put in charge.

A central committee, consisting of two rural supervisors, coordinating supervisor, and four outstanding principals, was appointed by the superintendent to devise a new report card for the county. Each member of the central committee met with two large groups of county teachers. Each group handed in a sample report card. From these suggestions the central committee planned the county report card.

The coordinating supervisor with the assistance of the superintendent of schools and the teachers, worked upon a separate report card for the schools in the Fort Bragg Union School District from that adopted by the county. After the teachers filled out a report card questionnaire and participated in discussions on essential items to be included, sample report cards were made. From reactions of teachers to these, a final report card was printed.

To promote curriculum study the county superintendent divided the teachers into seven groups under the direction of a rural supervisor, the coordinating supervisor and the county superintendent. Each group

in the county met at least seven times in a two-hour session to study curriculum problems. The state's four suggested courses of study for elementary schools in social studies, in science, in oral and written expression, in reading and literature, and the state texts in spelling, arithmetic and supplementary material in social studies furnished the basis for discussion. Teachers were able to obtain a unit of credit from Humboldt State College by paying a fee and, in addition to oral reports in meetings, by completing further requirements.

Teachers Go to School

The two groups assigned the coordinating supervisor included thirty teachers under direct supervision and many additional county teachers. The group, including the Fort Bragg Grammar School teachers, besides the seven required meetings, attended demonstrations of classroom teaching. The supervisor combined these professional group meetings with the meetings of study curriculum group for teachers in neighboring schools. Four demonstrations to illustrate certain techniques were given in the classrooms by the teacher with her children and were followed immediately by an analysis and discussion led by the supervisor. While the teachers in the neighboring schools were not required to come to these demonstrations at the Fort Bragg schools, they attended all of them. The following demonstrations were given:

One afternoon a sixth grade teacher illustrated problem work in arithmetic with a class of forty-three children. On the next afternoon she demonstrated a drill procedure based on weaknesses observed in the previous demonstration. Children were divided into groups according to their specific difficulties. Provision for precise practice to strengthen particular weaknesses was made, and a test was given at the close to measure improvement.

A fifth grade teacher showed how the new fifth grade geography, recently adopted by the state, could be used along with other supplementary books to help children answer problems in social science work.

The two first grade teachers gave pupil demonstrations in appreciation of poetry and music.

For interpreting a social science program with the thirty teachers in the coordinate plan, the supervisor placed emphasis on (1) the direct experiences of boys and girls to stimulate self-direction and meanings; (2) the exchange of experiences among different groups with common interests, and (3) the cooperative work of teacher and supervisor with the children in developing a unit of work.

In the rural schools teachers took children on trips to beaches to observe tide-pool animals in natural habitats and to the woods to study wild flowers. In the Fort Bragg Grammar School, through the cooperation of the superintendent and trustees, bus transportation was provided for the children. Visits were made to a duck farm, a chicken ranch, a stock farm, Noyo fishing harbor, a dairy, a nursery and a lumber mill.

Aim at Broader Point of View

To broaden children's contacts and to provide opportunities for social give and take, groups of children in neighboring rural schools were encouraged to come together and exchange findings. For instance children in the upper grades in East Mendocino visited the fifth grade in Fort Bragg to discuss specimens of sea life which each group was studying.

That the teacher and supervisor might work consecutively upon a new unit it was necessary for the supervisor to make numerous visits to the school rather than to visit at long intervals. For a short period of time a great many visits were made. On the average, however, approximately one visit a month was made to each school. Before each visit the supervisor knew the phase of experience to be demonstrated, selected and supplied reading material for children or prepared typewritten material for the particular group. Analysis of the work being given and discussion of leads for new experiences to follow were developed with the teacher.

During the fall semester of the school year the supervisor arranged demonstration meetings to emphasize the different reading techniques for all county teachers under the coordinate plan of supervision except the teachers in Fort Bragg Grammar School. These meetings were held from 10 to 12 o'clock on Saturday mornings at the rural school of the demonstrating teacher. One hour was devoted to observation of actual guidance and teaching and the hour following to an analytical discussion led by the supervisor in which the rural teachers participated. Demonstrations of different reading techniques were given in the following rural schools:

Recreational reading was shown by the teacher of the one-teacher school at East Mendocino. The demonstration included selection of books from those supplied by the new county circulating library, guidance in preparation for the Story Hour and the conduct of the actual classroom period. Study-type reading was illustrated by the teacher of fifth, sixth, seventh and eighth grade children at Noyo. The drill type of reading was demonstrated by the teacher of fifth, sixth, seventh and eighth grade children in the two-teacher school at Caspar. Children were grouped according to reading difficulties rather than to grade. A drill period was arranged to provide practice for these particular needs.

Get Acquainted Demonstrations

Schools were selected for demonstrations upon a basis of convenience of location rather than upon superior teaching ability. The demonstration was a means by which the children, teacher and supervisor became better acquainted. All three were cooperating to make the demonstration a success. If visiting teachers were expected it was necessary to make the classroom as attractive as possible. Attention was called to the proper mounting and hanging of pictures. Movable benches and cardboard easels on boxes of different heights were provided, in addition to attractive window boxes.

This descriptive account of coordinate supervision of the union district schools and the neighboring county schools shows how teachers were helped in building common understandings of techniques in the use of a circulating and central library, in checking report cards, in interpreting and using courses of study and state texts, in guiding a larger unit in social science and in handling different types of reading experiences.

Guidance at Grosse Pointe

By CHARLES E. LEAVITT

Discussing with homeroom adviser the problem of next year's course.

THE basic organization of the guidance program in the high school at Grosse Pointe, Mich., was adopted in May, 1931. During a period from 1931 to 1936 we have attempted to deal with the child as a whole individual, not as a bundle of parts—physical and mental, academic and nonacademic, educational or vocational.

Our chief concern has been with the counseling and guidance of our pupils as a means of achieving happy and successful adjustment of the individual to his life situation both present and future. With this point of view uppermost we have ignored such distinctions as moral guidance, educational guidance, vocational guidance and leisure time guidance.

As the pupil has continued his work in our school, problems connected with his present work and future plans have arisen. Many of these problems he could solve independently or with the advice of his parents. In other situations, however, he has needed the advice and assistance of one or more of the teachers in the school.

The school has attempted to give him assistance in meeting such problems connected with his school life as:

1. Getting adjusted to a new school environment.
2. Lack of success in his work; failure and low marks.
3. Lack of satisfactory adjustment to his fellow pupils and teachers.
4. Tentative choice of a field of vocational interest.
5. Analysis of his strong points and of his weaknesses.
6. Development of personal characteristics essential for success in life.
7. Planning his program of subjects in such a way as to yield maximum benefits in work and pleasure.
8. Planning a well balanced program of extracurricular activities.
9. Choosing a school in which to continue his education beyond high school, and planning his high school course to meet the entrance requirements of his chosen school.
10. Obtaining employment after graduation.

In order for the reader better to understand how these services are rendered, it seems well to review briefly the function of some of the key people in our organization.

The first member of the faculty the pupil meets is his homeroom adviser. His classroom teachers will in many instances change from semester to semester, but it has been customary for the homeroom adviser to remain with his group over a period of from two to six years. The adviser will then come to know the pupil better than any other teacher in the school and he is primarily interested in the pupil as a person and stands ready at all times to discuss any of the pupil's problems or plans with him. Through home visits and open-house contacts the adviser will come to know the parent. He has complete records of the pupil's school marks to date and other types of information that we consider essential to proper adjustment of the pupil in his new environment.

Another member of the staff whom the pupil comes to know early in his school life is the advisory chairman of his grade. Each of the six grades in our school has an advisory chairman who continues to specialize from year to year in the problems of pupils of that school grade.

Whereas classes will change from semester to semester, the homeroom groups remain intact as far as possible throughout the high school years. These groups are organized to encourage maximum pupil participa-

tion in their work. Under the direction of its officers and its faculty adviser, each homeroom group becomes familiar with school policies, traditions and regulations so that the curricular and extracurricular life of the school may be better understood. Each pupil is encouraged to participate in the activities of the homeroom, as it is through this participation that he will find some of the most important opportunities of his school life.

The homeroom period begins at 8:30 a.m. A forty-minute period is held on Tuesdays, and a ten-minute period on Mondays and Thursdays, when the office bulletins are read, and a five-minute period is held on Wednesdays and Fridays.

Much of the help the guidance program is designed to give pupils will come to them through the discussion held in their homerooms during the forty-minute period on Tuesdays. This work in the homeroom supplements the standardized school activities and aims to increase present and future efficiency as well as to give social and vocational help in recreational pursuits.

Every third Tuesday morning the homerooms of two selected grades attend an assembly program in the auditorium during the long homeroom period. These programs are arranged to supplement the guidance work of the homeroom and are classified under the following types: entertainment, guidance, music, drama, clubs and classroom activities.

Some types of problems taken up in the homeroom continue to concern the pupil throughout his high school career. These themes are, therefore, given attention in each grade on an increasingly mature level. That is, his homeroom each year takes up units of study involving, for example, character education, safety and self-analysis. Other types of problems are studied as they develop.

The homeroom, therefore, concerns itself with helping the pupil find the best solution to the problems natural to his grade level. Step by step, year by year, his development as an individual should be aided by the grade guidance program.

The special themes or the work of the six grades are shown in numerical order in the adjoining columns.

Basic Guidance Themes for Six Grades

SEVENTH GRADE: Know your school.

As a seventh grader the pupil wants to learn as much as possible about his new school. His homeroom will help him to become acquainted with his school. It will give him an opportunity to take part in student government and intramural athletics. It will introduce him to clubs open to seventh graders. It will provide him with social opportunities.

EIGHTH GRADE: What are your special abilities?

In the eighth grade the curriculum includes exploratory courses. In some of his work the pupil may excel, while in other parts of it he may not be entirely successful. On the basis of these experiences of the eighth grade as well as on the basis of his achievements in the past, his homeroom will help him to form accurate judgments of his own special abilities. This attention to his individual abilities and interests will help him to choose his elective courses for the ninth grade.

NINTH GRADE: What courses should you take?

As a ninth grader he will make his three-year plan for his work in the tenth, eleventh and twelfth grades. Building upon the foundation laid by the eighth grade guidance work, the ninth grade homeroom program undertakes to help him make his choices wisely. He will have an opportunity to survey a cross-section of various vocational pursuits of the modern world. His homeroom work will be correlated with his 9A vocational civics course, which all ninth graders take. He will tentatively select a field of activity in which he thinks there is large promise of success and happiness for him. After a preview of senior high school courses he will make a draft of subjects (his three-year plan) to be followed in his senior high school years. His vocational choice, courses required by our school for graduation, his avocational interests and college entrance requirements all are considered in making this plan for his high school years.

TENTH GRADE: Take stock of your progress.

As a tenth grade pupil he will take stock of the progress he is making toward the goals set by his three-year plan and make any revisions that seem wise in the light of his progress. New interests, a change in his vocational leanings or a change in his choice of college, all are valid reasons for revising his three-year plan. Special attention is also given in the tenth grade to the correlation of curricular and extracurricular activities so that no pupil will be disturbed by personal or social maladjustment.

ELEVENTH GRADE: Increase your knowledge of your special interest.

As an eleventh grader he has largely completed his required courses and has laid the foundation that is more or less common to all pupils regardless of vocational choice. The greater portion of his work in the eleventh and twelfth grades will be specialized in the fields of his particular interests. His homeroom now undertakes a survey of various institutions of higher education so that he may increase his knowledge of the opportunities beyond high school for training in the field in which he is interested. Business and professional men and women come to the school as guest speakers.

TWELFTH GRADE: Looking ahead to out-of-school life.

As a twelfth grader the pupil will review his achievements in both the junior and the senior high school. This evaluation of his development will assist him to a more carefully planned program of activity after leaving school. As a senior he is naturally interested in gaining specific information about how to get a job, either immediately after high school or after he had completed whatever further training he plans. To help him in this problem, business and professional men and women are invited to speak to the twelfth grade on the subject of placement in the types of work they represent. Many of them are personnel directors.

Married or Single?

Wedlock's Effect Upon Teaching Ability

By D. W. PETERS

PERHAPS no single aspect of our Western civilization is undergoing more rapid change than that of the economic position of women. In the phase of civilization out of which we have just passed, the economic position of woman was that of wife and mother in the home.

Woman today occupies a position altogether different from that which her grandmother knew. She has lost her industrial activities in the home, and to regain them she has been forced to follow the economic stream. The battle she has waged to regain a wider place in the social order is of immense significance to the family as a unit of society. The way this problem is being met, whether wisely or not, is profoundly affecting our marriage system.

After marriage many women retain, or seek to retain, their places of gainful employment and at the same time assume the rôle of wife and homemaker. The result is conflict due, in part, to economic competition. This competition appears to become more intensified during times of economic distress.

Makes Study of Group Prejudices

In this issue, as in many others, individual and group prejudices expressed through various agencies tend to influence legislation, policy making and administrative practices. These group prejudices, with their resultant influence upon educational practice, gave rise to a study which I made of one group of married women workers who loom as important figures in this controversy, namely, teachers.* This study seeks to disclose objective evidence on the relative teaching effectiveness of married and single women teachers through controlled study of the learning progress of pupils taught by the total population of married women teachers in one state (Virginia) and to show trends and evaluate school board policies in the United States which restrict or bar the employment of married women teachers. Revealing data are presented on practically every phase of the married teacher controversy.

What Marriage Involves

If marriage of the woman teacher does not involve a change of residence to another county or city, she may remain in her teaching position in less than 60 per cent of the school systems in the United States, according to data available. If, however, marriage results in a change of residence to another county or city, the woman teacher is barred from the practice of her profession in approximately 80 per cent of the school systems of the country. During the last ten years the trend has been against the employment of married women teachers.

No state is on record as having passed legislation bearing directly upon the employment of married women teachers. The power of the school board to terminate a woman teacher's contract because of her marriage has been tested in the appellate courts of many states with the result that some general legal principles have been established. They may be stated as follows:

1. In the absence of limitations upon teacher employment by statute law, a school board can determine its own employment policies on marital status of women.

2. Teachers under permanent tenure by statutory enactment are protected against school board rules providing for termination of services on account of marriage.

3. When the statute specifies causes for which a teacher may be dismissed, a board rule setting up marriage of a woman teacher as an additional cause is not valid.

4. In the absence of statutory provisions to the contrary, marriage of a woman teacher is not in itself grounds for dismissal.

5. In the absence of a statutory provision to the contrary, a by-law, reservation in the contract, or board rule to dismiss a woman teacher on account of marriage may be legally enforced.

6. If a woman teacher misrepresents marital status in order to enjoy benefits of employment, such misrepresentation constitutes fraud.

The measured achievement (in point scores) of pupils taught by married women teachers exceeded the measured achievement of pupils taught by single teachers by $.86 \pm 29$ when the married and single teachers were equivalent in age, training and experience.

The total average difference between the ratings of women teachers with and without marital status and equivalent in age, training and experience is too small to be significant when the two groups are rated by superintendents. Such difference as exists is in favor of the unmarried.

When the judgments of the superintendent, supervisor and principal are combined into a single rating for each teacher, the differences in ratings received by married and single women teachers are too small to be significant. A small total average exists in favor of the married teachers. The average ratings of principals tend to be higher for married women teachers than for single women teachers, but the difference is too small to be significant. The average ratings of supervisors tend to be higher for married women teachers than for single women teachers, but the difference is too small to be significant.

*Peters, David Wilbur: The Status of the Married Woman Teacher. Teachers College, Columbia University, Contributions to Education, No. 608. New York: Bureau of Publications, Teachers College, Columbia University, 1934.

When married women teachers are equivalent to single women teachers in age, training, and experience, and are teaching in like situations, the following differences occur according to reports of the two groups:

The married group exceeds the single group in average number of years in the same system by one year; in average number of years in the same position by a half year; in average number of days absent on account of personal illness by .16 day per session; in average number of days absent on account of illness in the family by .02 day per session; in average number of semester hours' credit earned in summer school by one-fourth of one semester hour; in average number of semester hours' credit earned through college extension classes and correspondence courses by .10 and .12 of one semester hour, respectively; approximate time spent in preparation specifically for classroom teaching by .26 hour per week; and for directing out-of-class activities by .06 hour per week; in average number of out-of-class activities directed by .38; in average number of individuals wholly dependent upon them for support by .11; in average number of individuals partially dependent upon them for support by .32; amount of time spent in household duties by two and one-quarter hours per week; in the forms of recreation participated in by .02 per cent; in positions of leadership in professional organizations by 5 per cent; in organized community activities by 27 per cent.

The single group exceeds in the average number of visits per month to homes of pupils by .19; in hours spent in social diversion by one hour per week, and in resentment of the amount of out-of-school time which teaching exacts by 10 per cent.

This study produced no evidence that justifies a policy of discrimination against married women teachers as a class. If any relationship exists between marital status and teaching effectiveness, such relationship is without adequate significance to justify its use as a determining factor in fixing employment policies. Employment policies are unworthy of the children for whom they are made if they do not eliminate incompetent, neglectful and inefficient teachers. By the same standard such policies must conserve for the classroom the best existing talent and training. A blanket rule that arbitrarily eliminates individuals as a class levies a high tariff on training and talent and such rule should find reason for existence in unprejudiced sustaining evidence.

Split Period Classes for Slow Pupils

By H. O. BURGESS

THE accompanying outline shows graphically the operation of a split period in the J. C. Murphy Junior High School, Atlanta, Ga. The regular period is fifty minutes in length. Twenty-nine of the thirty-four classes in the school operate on a normal or regular schedule, which means that each class spends the entire period at work on one subject, whether that subject is English, mathematics, manual arts, home economics, art or social science. Boys and girls are together in all classes except shop and home economics, music and physical education.

Attention is called to the fact that boys and girls are separated in art. Both boys and girls are given a daily period of physical education.

The pupils in this group are encouraged to select shop and home economics in the high eighth grades rather than Latin or business practice. The majority of the children are satisfied to do so but the few who insist on selecting other subjects are allowed a trial. If they fail, they are returned to their usual classes. In order that they may not feel too deeply the segregation to which they are scheduled, these children have recess and homeroom periods with the other pupils; they participate in assemblies and other school functions and receive report cards at regular intervals. An attempt is now being made toward a different report card and a promotion certificate.

Classes average about sixteen pupils, with I. Q.'s from 60 to 70. Results of this plan are that more factual materials are assimilated by the pupils through a greater variety of teaching materials and methods. Discipline is greatly improved. Pupils are happy and satisfied.

SCHEDULE FOR ADMINISTRATION OF SPECIAL GROUPS

Classes	*First Period*	*Second Period*	*Third Period*	*Fourth Period*	*Fifth Period*	*Sixth Period*
9 Low	Art(G) P.E.(B)	Art(B) P.E.(G)	Math. Eng.	Science Civics	H.Ec. Shop	Auditorium
8 High	Art(G) P.E.(B)	Art(B) P.E.(G)	Science Hist.	H.Ec. Shop	Math. Eng.	Auditorium
8 Low	Science History	Math. Eng.	Art(G) P.E.(B)	Art(B) P.E.(G)	H.Ec. Shop	Auditorium
7 High	Math. Eng.	H.Ec. Shop	Art(G) P.E.(B)	Art(B) P.E.(B)	Science Geog.	Auditorium
7 Low	H.Ec. Shop	Science Geog.	P.E.(G) P.E.(B)	Math. Eng.	Art(G) Art(B)	Auditorium

Slow pupils are assigned a split schedule or, more properly, a split period schedule. In this schedule the four academic subjects, mathematics, social science, English and general science, are taught within two full periods, that is, each two subjects are given one period. The subjects are given approximately half of the period each and are taught by the same teacher. The particular teacher-subject combination in this school is English-mathematics and general science-social science, an arbitrary combination.

THE SCHOOL PLANT

By WILLIAM LESCAZE

Let's Build for Today

Main entrance to Ansonia High School, Ansonia, Conn. The low retaining limestone wall was designed as a place for pupils to sit between classes.

Functional truth, simplicity, organized order and economy are qualities that must be inherent in our buildings, believes this architect and author, who, with Vernon F. Sears, as associate, planned the high school in Ansonia, Conn., which is described.

EVEN the layman is aware that traditional concepts of education are being discarded everywhere. For it is a different world today into which children are being born, and it is for our world of today that they must be educated. Traditional school buildings are likewise inadequate. Buildings are needed that are built from the concept of modern education so that they will have the facilities for it.

Architecture, to the uninitiated, might seem like an art that is apart and independent of all social movements. Yet actually every building that is worthy of its name is the embodiment of a social concept. Someone once said that architecture is an idea expressed in stone. The building that we offer as a modern school not only provides the facilities for the activities that constitute modern education, but should itself be an expression of these concepts or ideas translated into architecture. In fulfilling its purpose thoughtfully and truly, it becomes at one with its purpose and the very instrument of education, facilitative, impressive and eloquent.

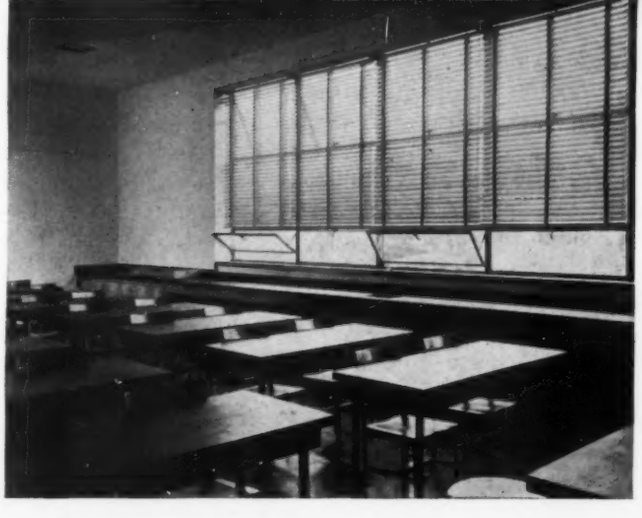
Only modern architecture, of which the recently completed high school in Ansonia, Conn., is an example, gives the architect that freedom to express ideas that makes his art a living art. Modern architecture often has been called functional architecture, for it is essentially a planning from within, the creation of facilities for activities and often the very activities themselves. So the building grows outward, and becomes an external expression of its content. If we had proceeded along traditional lines, chosen a classical façade and tried to fit the space within it, we never would have succeeded. The façade would not have been beautiful because it was not true, and the disposition of the space within it a makeshift because of the confusion of restriction. It is our belief that the approach of the modern architect is not only most sensible and rational, but it is the only approach wherein architecture, as one of the creative arts of life and culture, fulfills its function.

In the Ansonia High School, with a free working capacity of 900 pupils,

an attempt was made to embody these concepts. The problem, conditions and needs that were to be dealt with in Ansonia were carefully formulated. The first thought was the program. The exact nature of the requirements, not only those of the board of education, but also those of the superintendent and the principal, were studied and carefully analyzed. Next, the site was studied; all fixed conditions, the topography of the land, the orientation of the building, locations of streets and the amount of traffic, the adjoining buildings and play facilities, were considered in relation to the directions of light, sun and wind.

Floor plans were the next consideration. The relationship between activities and administration was studied in connection with the program and site. Next, materials were chosen for permanency, low upkeep and durability, as well as beauty. The façade, which came next, was designed as an honest, undisguised expression of the inside. External form followed floor plan, windows being placed where needed, as well as all other external aspects. The final consideration was finance, matching the budget and considering economy of operation.

We have described this in detail because it is our belief that every building problem contains within itself its own answer, once the problem is accurately defined. Note from the photographs how we have departed



View of auditorium and stage from projection booth. The room seats 1,108 persons on one floor; there is no balcony. The continuous light trough is metal, enameled yellow. Wall curtains are gray, and the main draw curtain is russet. The cyclorama is chocolate brown, while the tormentors and teasers are a very light tan. Walls are white, scour finish. The ceiling slopes up from the rear of the auditorium. The middle third is hard white plaster, which acts as a reflecting surface and the remainder is of acoustical plaster. Floor is concrete.

View of biology laboratory, showing window work tables including germinating bed and aquarium. Venetian blinds are yellow; the walls are hard white plaster and the ceiling is acoustical plaster. Flush fixtures direct light on to the tables.

View of the main facade. The walk is to the main entrance. The projecting limestone wing houses the principal, secretary and clerks and allows outdoor supervision from within. The brick is tan, laid in common bond. Columns are painted battleship gray and the metal letters, "Ansonia High School," are enameled blue, while the stucco piers are blue-gray.

from much of our current school architecture. Here we have built from within and the appearance of the building became that which it is, a noticeably honest expression of itself. The traditional school, on the other hand, chooses one of the accepted classical façades and fits into it the interior arrangement.

The three major elements of the problem were classrooms, auditorium and gymnasium. The auditorium was placed on the extreme north side of the property and as near to the main thoroughfare as possible, to assure easy accessibility by the public, as it will be used for other than school purposes. While allowing, during the day, quick assembly from both the first and second floor of the school, for evening use the school itself would not have to be opened.

The administration offices are at the school entrance, as they are the control room of all activities. An open porch has been placed between this unit and the auditorium, which serves as an entrance to athletic events in the field and gymnasium. The porch also permits a view from the street of the large open court, establishing an unobstructed communication between the groups playing on the field and the community. The physical director's office is on the field side of the gymnasium, thus affording control of both outdoor and inside activities.

Most of the classrooms are located on the second floor, and enjoy east-west light. The special rooms such as the physics and chemistry laboratories and commercial department are located in the east-west wing and have north light. The location of this wing left a fairly large open field.

The fact that this is a corner lot might have been overlooked and the building planned in accordance with accepted tradition, that is, with the main entrance in the center of the main avenue without easy access to the auditorium, making it almost impossible to use the school after hours unless the whole building were opened. Instead of the open porch serving as an entrance from the sports field to the gymnasium, a traditional plan would have located the gymnasium so that the entire school would have been trespassed before reaching it. The wings, of course, would have been planned symmetrically with two wings exactly alike on both sides, irrespective of their relation to inside activity. A school planned in the traditional manner sel-

dom takes into consideration the amount of sunlight that can enter the classrooms, as sizes of windows are limited only by traditional types.

We should like to point to the considerable use of glass for maximum daylight and ventilation within the classrooms, the windows being so arranged that no reflections occur on the surfaces of the blackboards. We should like to point to the clean and simple lines of the building, to the equally satisfactory view from any approach, to the correlation between the building and its site and also to the fact that not one cent was unnecessarily spent for mere "dressing up" since all the effect was obtained through judicious composition of the various masses. It hardly can be said that this building is revolutionary; it simply shows the return to architectural honesty, instead of an indulgence in architectural falsity. It is, in itself, a plea for architectural truth, and a recognition of the fundamental nature of modern life, which industry has transformed far from anything known to the past.

It is only a return to fundamentals —to the approach to architecture that made classical architecture so great. Our life and times are different, and we must build for them, as they did, embodying our concept of desirable activities, occupations and ideals and using the resources and techniques at hand, just as they used theirs.

This school, it is hoped, will answer the needs for which it has been built. It is representing a new housing for the liberated education that must have its setting in a school that expresses an organic concept of life. Irrespective of the age, good architecture has always expressed the social values and ideas of its time. Every good building must stand as an impressive expression of the qualities that were embodied in it. Functional truth, simplicity, organized order and economy are fundamental needs of the modern world. These qualities must be inherent in our buildings. Educators have found that often the things unconsciously absorbed by the youth become the most deeply imprinted and influential impressions.

Architecture, because we live with it constantly, pervades our beings and, for the most part because it is absorbed unconsciously, it is absorbed deeply. Should not school buildings, wherein the mind of the youth of the nation is formed, be built with every serious consideration of what in themselves they express?

A prominent educator, William Burnlee Curry, now headmaster of the school at Dartington Hall, in South Devon, England, summarized the aims of the modern architect in the following statement: "A modern school design symbolizes qualities at which any sound educational system would aim, such as truthfulness, courage, freedom, adaptability and intelligence, and for this reason I agree cordially with the architect that it cannot help being a most valuable source of stimulation to those who should live in it. We are mostly timid creatures, terrified of wandering far from the beaten track. In modern architecture, courage, intelligence and sensitiveness are applied to the solution of human problems and nowhere are these qualities more needed than in the field of education, both in its architecture and in its method."

Natural Amphitheater Is Stadium Site

By FRANK A. JENSEN

THE La Salle-Peru Township High School dedicated its new $300,000 stadium in early October with a football game with the Joliet Township High School. This stadium is located in a valley in Central Park in Peru, Ill., adjacent to the high school site. This valley forms a natural amphitheater for the stadium and gridiron. The remainder of the park was turned over to the city at the same time the high school took possession of its part. This park was developed by a local clock manufacturing company, which gave the property, valued at $62,000, to the La Salle-Peru Township High School and the city of Peru.

This stadium was a Works Progress Administration project, the high school district furnishing about 15 per cent of the cost in skilled labor and materials for construction. Allen and Webster were the architects.

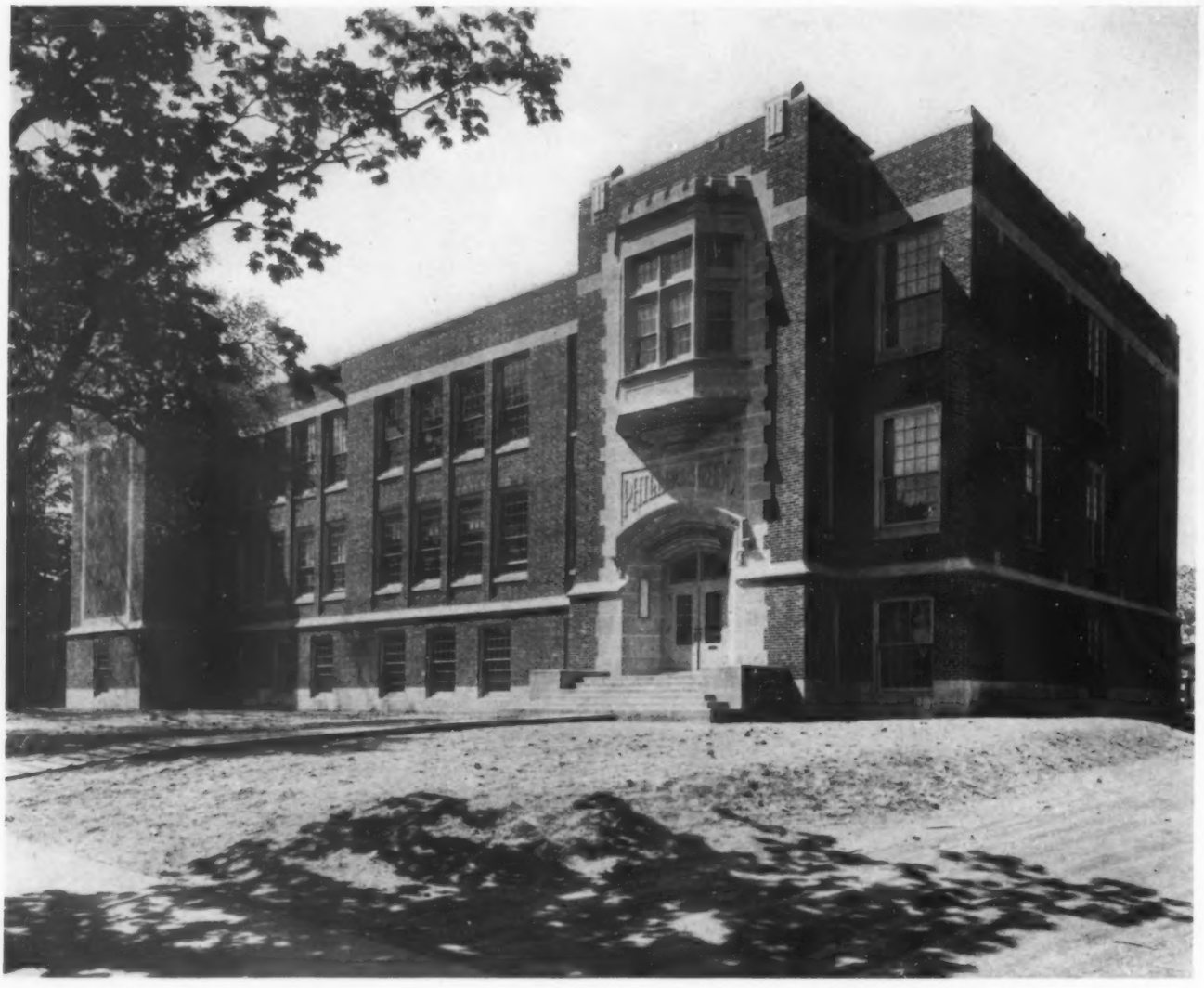
High school stadium seating 3,800 erected with WPA aid in Peru, Ill.

At Matthiessen Field, located between the high school building and the stadium, are two football practice fields and a quarter-mile running track with a 420-foot straightaway.

The gridiron is surrounded by a high concrete wall on three sides and the stadium on the east side, which cuts off the view of the playing field of those outside. The seating capacity of the stadium is 3,800.

The lighting of the gridiron is accomplished by eight 60-foot poles carrying forty-eight 1,500-watt lights. Four steel poles are located in front of the stadium and four wooden poles on the west side of the gridiron.

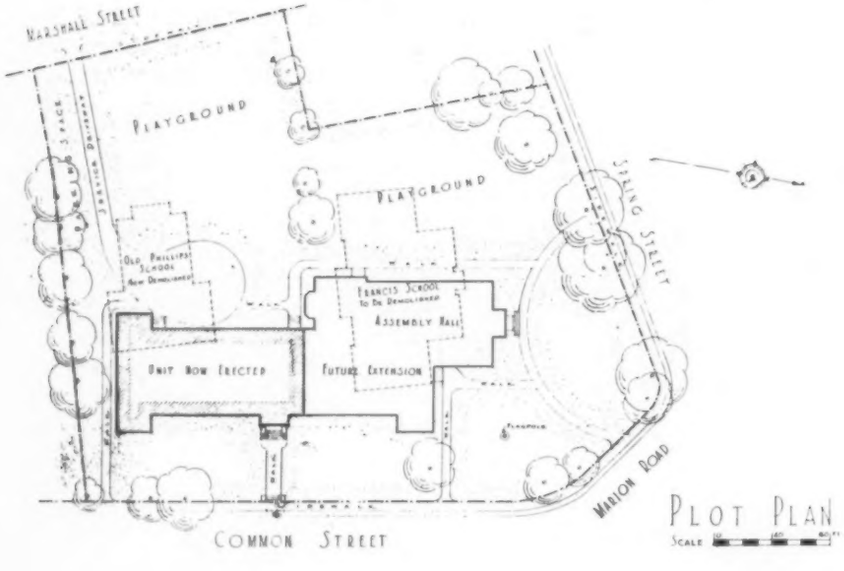
The field house, 106.5 by 29.6 feet, is located on the south of the gridiron and includes two spacious team rooms with showers and a large storage room, one for the home team and the other for the visiting team. Above the field house on the street level is the main ticket office. A secondary ticket office is located on the south side of the stadium on another street level. A press box with a capacity for twelve news writers, located on top of the stadium, gives complete vision of the entire playing field. The press box is of aluminum construction supported by two piers of concrete. The field house, ticket offices, press box, toilets and concession room are all heated electrically.



Phillips unit of Phillips-Francis School

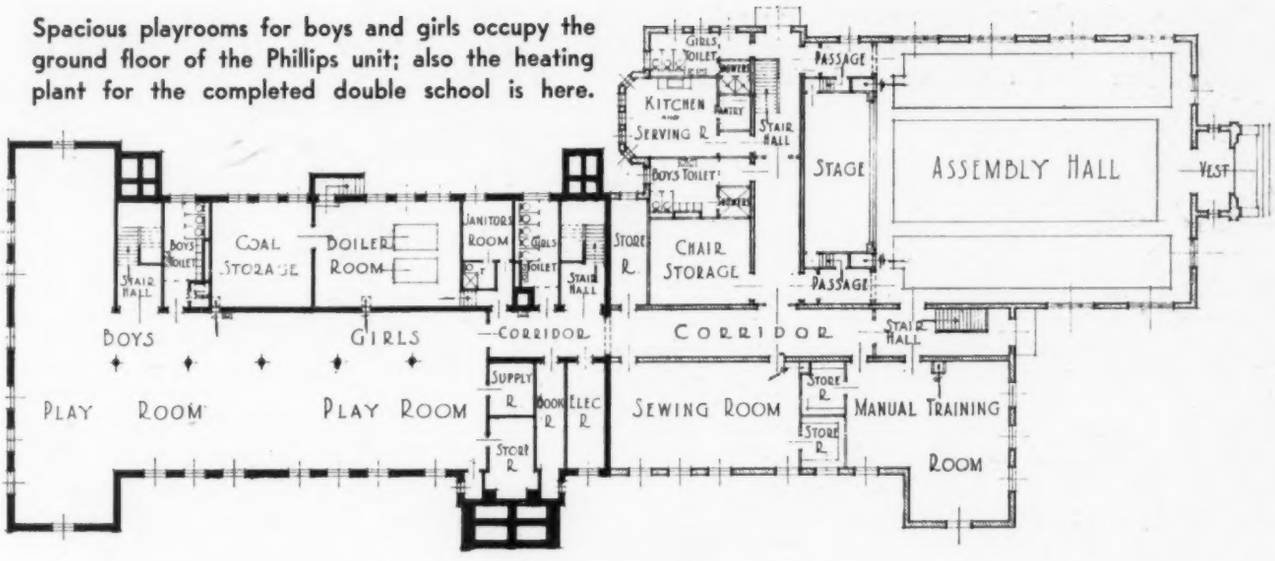
One Up—One to Go

By JOHN RITCHIE



THE town of Watertown, Mass., in the newly constructed Phillips School, presents the latest example of schoolhouse planning with an eye to the future. The corner of Common and Spring Streets long has been devoted to education; here more than eighty years ago, the town built a high school, a progressive undertaking for the time. The building was a two-story edifice with gables and with a tower rising two stories above the roof. It was constructed of wood; its style conformed to the ideas of the

Spacious playrooms for boys and girls occupy the ground floor of the Phillips unit; also the heating plant for the completed double school is here.



GROUND FLOOR PLAN

SCALE

day, and it served its purpose for a long time.

Twenty or thirty years ago a successor was built about one-half mile distant, and ten years ago a third high school, in brick, was placed on a large lot just across Common Street from the original building. This, with a recent addition, is serving its purpose today in accordance with the demands of a modern high school program.

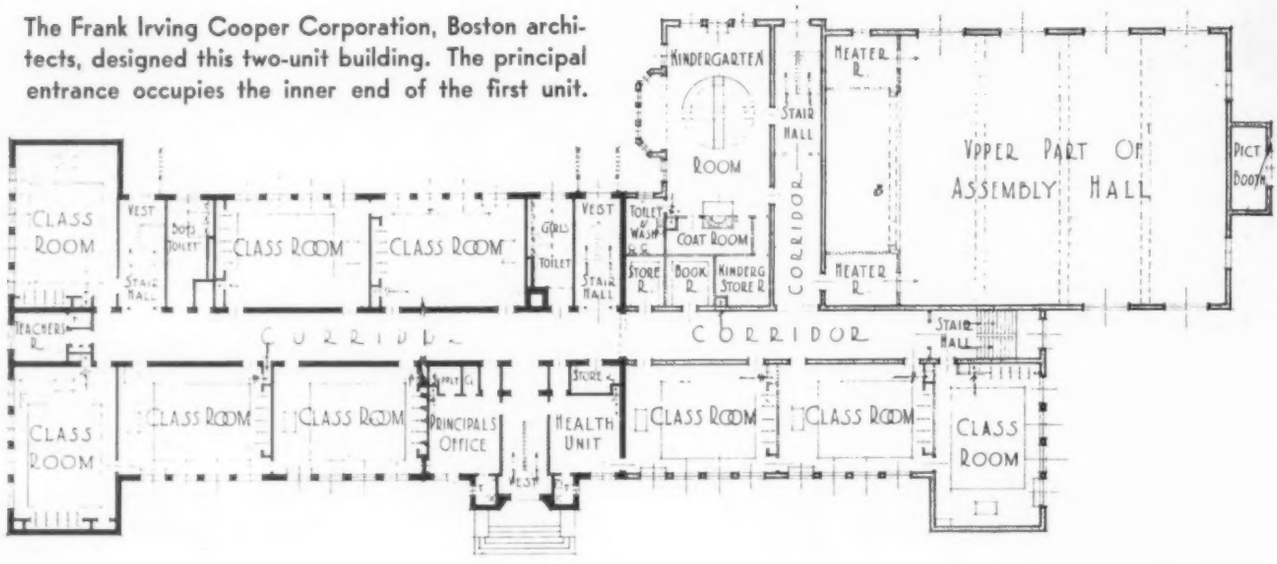
The original wooden high school building, known as the Phillips School, was given over to the classes of an intermediate school. With the increase in pupil population of this grade, a second school, the Francis, was built near it on the same lot about forty years ago. This is in use today, a building in brick with two stories and a basement, which has filled educational requirements reasonably well.

The building is now past its prime, and while its exterior is still presentable, the interior is faulty. Its old-fashioned classrooms no longer fit the school program; its roof is defective; its walls are not waterproof during heavy storms; its floors and stairways are worn and defective, and it is far from fireproof. It is true that the building could be repaired, but the cost, when compared to that of an up-to-date construction would be high.

In 1934 and 1935 public interest was aroused in a project to improve the Phillips-Francis School unit, the

The projecting bay window of the library and study hall is an interesting architectural feature of both interior and exterior. The book alcove in the bay over the front entrance adds an unusual note to this cheerful room. It is easily accessible from the adjacent classrooms and those across the corridor.

The Frank Irving Cooper Corporation, Boston architects, designed this two-unit building. The principal entrance occupies the inner end of the first unit.



FIRST FLOOR PLAN
SCALE

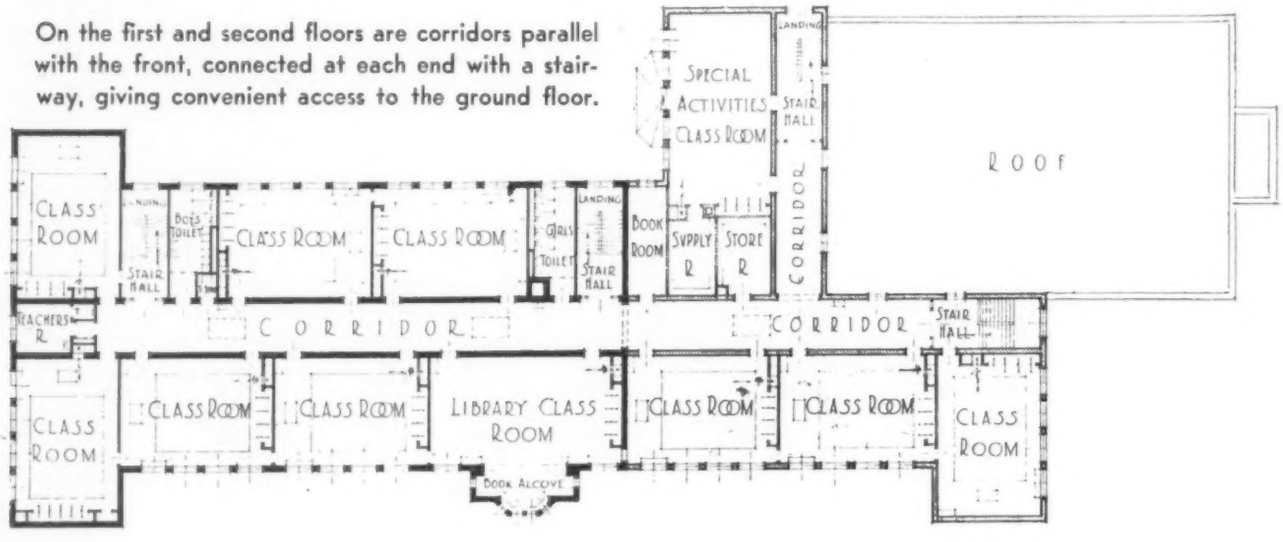
local parent-teacher association having led the movement. There was considerable discussion and some opposition, but in the end a building committee was named and the services of architects secured to prepare a comprehensive solution of the various problems.

Following a survey of the needs of the school population in this growing community, the architects suggested the removal of both elementary schoolhouses and the construction of a single new building, which would provide accommodations for existing pupils, with a reasonable margin for future growth of the school population. The citizens voted to proceed with construction of one of the two units called for in the plans, the Phillips unit. This meant removal of the old wooden high school building and erection of a new building. The new school was opened in January, 1937, and now houses 500 pupils.

The entire front of the Phillips-Francis School will be 250 feet long, of which the Phillips unit takes about half, some 125 feet, with a depth of 60 feet increased in the end section to 90 feet. As this unit is to be only half of the complete building, the principal entrance, which will serve both units, is placed at the inner end, yet the present front has a pleasing balance. The end wall here is so constructed that the Francis unit may be added without the costly demolition so often necessary when an addition is made to a structure.

The new building is in brick with stone trimmings; it has two stories and a ground floor, the latter being largely above grade, which gives the appearance and space of a third story, and decreases illumination costs. The entrance, forward of the line of the rest of the front, has an arched doorway in stone, a section for name, stone panels at the roof line and projecting bay window of the library on the second floor. The end section is in brick and is decorated. The windows are in groups of four, and add

On the first and second floors are corridors parallel with the front, connected at each end with a stairway, giving convenient access to the ground floor.



SECOND FLOOR PLAN
SCALE

Classrooms predominate in the Phillips School. The Francis unit will provide the assembly hall and rooms for manual training, kindergarten, domestic arts and special activities. To the right is a corridor in the Phillips unit.

to the sightly appearance of the façade. The building is of first-class construction, it is fireproof, the structural floors are of concrete and the corridors have glazed brick walls and tile floors.

On the first and second floors are corridors parallel with the front, connected at each end with a stairway giving access to the ground floor, and opening directly outdoors through the back wall. At the central doorway is a vestibule running back to the axial corridor of the first floor. On one side of this vestibule is the office of the principal (who may be reached from the outside without disturbing school activities) and on the other side is the health unit. The enlarged end section has two classrooms separated by a retiring room for teachers. Four other classrooms are on this floor.

The library and study room has its place at the right end on the second floor. A book alcove is in the bay window, mentioned as a feature of the front above the entrance. There are six classrooms on this floor, a retiring room for teachers and lavatories for boys and for girls.

The ground floor has spacious playrooms for boys and for girls, the office for the janitor, the heating plant for the completed double school, fuel storage and utility rooms.

In the Phillips School classrooms predominate, and it might be termed the classroom section of the combined school. The Francis section will provide a large assembly hall, six standard sized classrooms, halls for manual training, sewing and domestic arts, a kindergarten and activities' hall.

The assembly hall or auditorium is to be 60 feet by 70 feet with a stage, accessories and special lavatories. In addition to its uses in the school program and for pupil gatherings, it will be at the service of the community for meetings, lectures, concerts, exhibitions and social occasions. The auditorium will have its own special entrance in the end of the building, providing access to it without interfering with school exercises. A convenient storage room will care for the seats when the floor space is to be clear. A kitchen is close at hand. The auditorium will be connected with the public address system of the school, so that educational features presented there may be heard in the classrooms. The use of the school assembly hall by local citizens is one of the outstanding benefits that the modern school auditorium makes possible.

Better Plant Practices • • •

Care of Shop Equipment

A good time to look over shop equipment and note articles needing treatment is during the Christmas holidays. If you will call upon Lester B. Robertson, custodian-in-charge at Guernsey, Wyo., you will find a man with strong convictions on this subject.

Brushes, for example, constitute a considerable problem in tool maintenance, he will tell you. "Under no conditions should they be immersed in water, while in storage, which so often is the case. Such a treatment softens and ruins the bristles so that they never regain their elasticity; in addition it may swell the heel of the brush so as to split the ferrule and render the brush worthless. Brushes that have been used in shellac should be immersed in a container of about one-half denatured alcohol and one-half shellac. Brushes that have been used for varnishing should be immersed up to the ferrule in half turpentine and half varnish, and brushes used in paint or enamel in half turpentine and half raw linseed oil. When hung in the container on wire or spring, the bristles should clear the bottom at least 1 inch. They will then remain straight, clean and resilient.

"Woodworking tools, to serve efficiently, must be kept in good condition and free from rust. Since these tools are used frequently during the holiday vacation this also is a good time to inspect them for minor repairs such as new handles or loose screws. This check-up should be carried on throughout the year. If saws have become rusty, they may be polished by rubbing them with pumice stone and oil. Placing tools, such as saws, in a cabinet aids in keeping them clean and dry; hence free from rust. It is much better to have tools hanging in a cabinet than lying in drawers, for in the drawers they slam against one another and often the edges become damaged."

Custodians Build Good Will

Importance of the custodian in developing favorable public opinion toward the school system is emphasized by S. A. Cook, superintendent of buildings and grounds, board of education, Pasadena city schools, Pasadena, Calif.

"The custodian's personal influence upon children in an elementary school," states Mr. Cook, "is scarcely less than that of the teacher, it is claimed. He is often the only school man with whom elementary pupils have contact during the school day.

"Since ideals are formed largely by the experiences and contacts of a school child, it is essential that the care of the school building be not inferior to that found in the best of the homes. Parents of the children are quick to determine whether or not a school building is clean and well kept. They will also recognize readily sources of danger and lack of sanitation. From these factors definite mental reactions will be formed.

"School plants are frequently used for functions of the community at large. The care that the building receives will make a marked impression on those visiting it.

"School buildings and grounds can add much of aesthetic value to a locality. If the appearance of the exterior of the building is unsatisfactory, it will elicit unfavorable criticism from the neighbors and citizens of the community.

"The custodian must be of high moral character and his conduct must be exemplary insofar as his contact with the school child is concerned. Any deviation from high standards will quickly travel to the child's parents.

"Not only what he does but what the custodian says about the school is frequently accepted by many people as law and gospel.

"In his dealings with the public, the custodian must be diplomatic. He must know how to approach the public which uses his building in such a way that no matter what his message, he will not give offense and at the same time secure its cooperation."

Know Your Floors

That always important question of floor maintenance is brought up for discussion again this month by Charles Welch, building superintendent, Leavenworth Central School, Wolcott, N. Y.

"You can't treat a floor successfully," Mr. Welch contends, "without first knowing something of its composition. A treatment used on one type of floor may be absolutely ruinous on another, so give due consideration to the purpose for which it is intended, the amount of traffic it has to bear, and so forth."

Mr. Welch proceeds to describe how he takes care of his gymnasium floor which is maple strip laid on a sub-floor, resting on magnesite stringers bedded in concrete. Everyone ready with his notebook?

First, the floor is swept with a chemically treated dust mop every day. This is essential as it removes all dirt, sand and other abrasives that cut and wear the finish rapidly. At the end of a week all marks and rubber burns are removed by hand with a floor dressing especially designed for hardwood floors. This is used as follows. Take a small pad of steel wool and dip into the liquid. Then rub the spot lightly until it disappears, and wipe with a clean cloth. When all spots are removed, the floor is sprayed with a dressing and gone over with a clean yarn dust mop, brushing crosswise and lengthwise. It is then ready for another week's wear.

During vacation periods the floor is thoroughly cleaned by scrubbing with an electric scrubbing machine using a neutral oil soap. Following this it is given one coat of gymnasium seal which should not be too soft because of rubber burning nor too hard to be slippery.

To get the effect that is desired for gymnasium floors, there must be cooperation, Mr. Welch contends, between the principal, the physical director and the maintenance staff. "There are certain rules," he explains, "that we enforce in order to obtain this objective. No pupil is allowed on the floor unless provided with gymnasium shoes, except at dances when the floor has been conditioned for that purpose. This eliminates cuts and scratches in the surface which no amount of labor can remove except by refinishing. No food or drinks are served in the gymnasium as this necessitates mopping, and the less water used on a floor of this type, the better. The use of confetti is also prohibited as the paper gets in the cracks."

Mops on the Move

Most of us have at least a bowing acquaintance with mop trucks, but not the type perhaps that is now standard equipment in the Detroit schools. This is a combination outfit in which the chassis may be used for light trucking of supply baskets and other material through corridors. H. P. Dolan, supervising engineer, was telling us about them not so long ago. Two removable mop pails of 32-quart capacity are carried on a chassis made up of steel angle iron, fitted with rubber tired wheels and rubber bumpers. There is no better way for transporting through the buildings such items as supply baskets, sweeping compounds and soap powders.

Location of Classroom Windows

By W. K. HARRISON and J. A. FOUILHOUX

EDUCATION is a dynamic process. Changes in its content and method are continually being made to meet the demands of state and society. Major shifts in method develop slowly, frequently resulting in the creation of traditions that are difficult to alter. Teaching methods of past decades are largely responsible for many of the school building practices in vogue today. In several cases these traditional practices have developed prejudices definitely handicapping progress. If school design is to advance in step with educational programs, it is essential that these traditions and prejudices give way to objective determination of all elements of design and construction. Not of least importance in this field is the problem of natural lighting of classrooms.

Advantage of Unilateral Unproved

In answer to the question of what determines desirable window location in classrooms, many school men and architects would say that unilateral, left hand lighting is most satisfactory. It is difficult, however, to point to any research data that definitely prove these desiderata. The analysis presented herewith is an attempt to bring to the surface the basic factors through which these beliefs or "standards" have been created and to point the way to a more adequate solution of the problem.

A study of the recommendations of many educators and architects indicates that the common beliefs which have created the standard for left hand lighting include the following:

1. Since most pupils are right handed light should come only from the left to prevent shadows on the writing surface.

2. Light from the front causes direct glare in the pupil's eyes.

3. Light from the rear produces shadows thrown on the desk by the pupil's body.

4. Unilateral light is less trying on the teacher's eyes. Especially is this true when teacher must face a rear window.

5. Bilaterally lighted rooms offer architectural difficulties in allowing for building annexation. Also space outside the building is saved that would otherwise be required as a protection for bilaterally lighted rooms.

6. Cross-lights are injurious to eyes.

7. Sky glare is eliminated by unilateral lighting.

8. The most desirable exposure can be secured by unilateral lighting.

9. Chalkboards may be placed on walls opposite windows only when unilateral light is provided.

10. Glare on writing and reading surfaces is eliminated when light comes from left-rear of the pupil.

Persons who advocate bilateral lighting frequently offer the following reasons for their choice:

1. Bilateral lighting offers more illumination.

2. Bilaterally lighted rooms are more cheerful and friendly than unilaterally lighted rooms.

3. Natural ventilation is more easily provided with two window exposures. Better air motion results.

4. Right hand windows with corridor wall provide for the natural lighting of corridor spaces.

5. Right hand windows with corridor wall provide more illumination.

6. Right hand windows above the chalkboard offset the light absorption of the board.

7. Glass walls may be less expensive than solid walls.

It is necessary to evaluate each one of these reasons in order that a satisfactory understanding of the situation can be achieved.

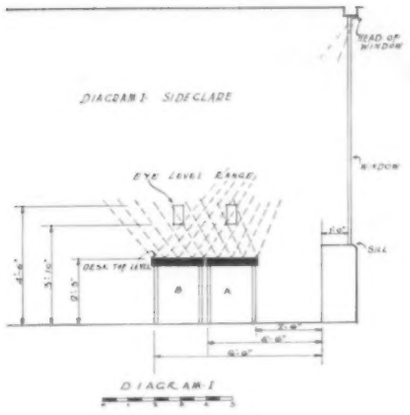
There is no question that heavy shadows cast by the hand in writing are undesirable and probably cause a degree of eyestrain, if present over any long period of time. However, is it justifiable to assume that pupils in a modern school will spend any large portion of their time writing? Furthermore, shadows are caused by differences in the intensities of light originating at two different sources. If the light coming from the right is less intense than the light from the left, no shadow will be produced. Similarly, light from the rear of the pupil will not cause a shadow provided light from the front or sides of the pupil is stronger.

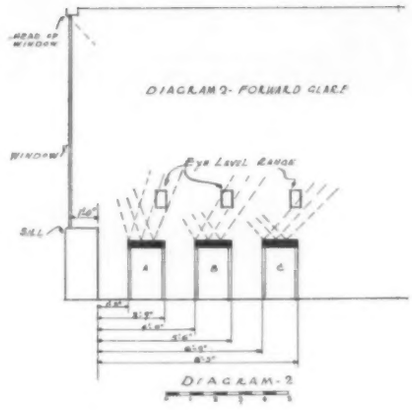
Shadows and Desk Arrangement

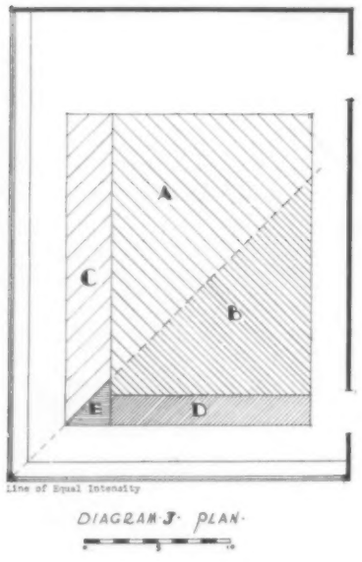
Therefore, the problem of eliminating shadows is one of governing intensities. It must also be considered in relation to the activity of the pupil.

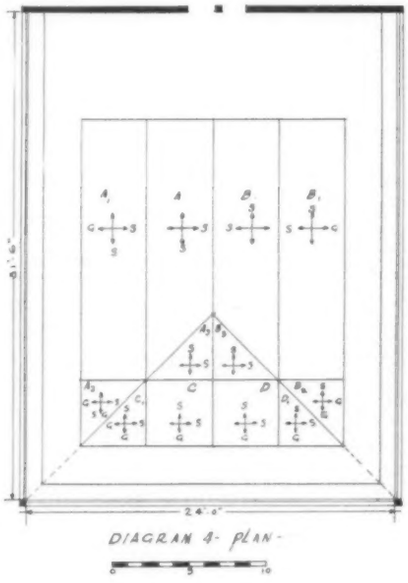
Diagram 3 is a floor plan of a typical classroom, 23 feet wide and 32 feet long, with windows on the left and rear. For the purposes of limiting the discussion, it is necessary to assume that the light entering the windows is of equal intensity at all points. It is also assumed that the pupils are all seated within the shaded areas. This allows for aisle spaces 2½ feet wide on all sides and 7 feet wide in the front of the room. Based on these assumptions the dash line passing diagonally across the room indicates the line where the intensity of light from the rear window will be equal to the intensity of light from the left window. Those

Two of the better known associate architects of New York City present their views on the natural lighting of classrooms. A second article on design of window areas will follow in the next number.









pupils in Areas A and C would receive the highest intensity of light from the left, while those in Areas B, D and E would receive highest intensities from the rear window. Thus, if all pupils faced forward, no shadows would be present in Areas A and C, although pupils in Areas B, D and E would cast shadows on their desks. These shadows would be of varying intensities, the most serious cases being nearest the rear window. If all the pupils in Areas B, D and E turned toward the left window, the rear light would come over the left shoulder and the shadows would not appear on the desk surfaces.

Diagram 4 illustrates the conditions existing when light comes from three sides of the room. The arrows indicate the directions in which the pupils may face. When the letter S follows the arrow, it means that a pupil facing in that direction in the area will cast a shadow on his desk surface. The shadow in Areas A and B will be very weak in comparison with those in Areas A_1 and B_1. Turning the desks at a 45° angle to the windows and bringing the most intense light over the left shoulder will eliminate the shadows.

Based on the foregoing analysis, shadows can be eliminated by proper arrangement of desks. If desks are fixed to the floor all facing in one direction, then unilateral left lighting is advisable. The latter condition is rapidly disappearing with the more progressive program using movable furniture.

Glare is of two types: direct and indirect. Direct glare is caused by viewing the source of the light, while indirect is caused by light being reflected from a bright surface into the eyes.

The intensity of direct glare is dependent on the amount of sky that can be seen and the brightness of that portion of the sky. Obviously, it is impossible to consider this problem in any general manner. Local variations in conditions must be studied. When the pupil has his head down in working on the desk surface, direct glare is practically of no importance. When the head is raised, the eyes may be required to make considerable adjustment because of the bright sky. Of course, if the sky is shielded by obstructions outside of the building or by shades on the upper part of the windows, this eye adjustment is not a factor. In general, facing the windows is undesirable and has been known to cause eyestrain. Facing the windows in shops and mechanical drawing rooms is frequently desirable to obtain uniform distribution of light.

Indirect glare is readily detected and may be avoided by proper arrangement of desks. Diagram 1 illustrates glare caused by the reflection of light rays striking the working surface and writing paper. The boxes labeled "eye level range" indicate the range of positions that may be taken by the pupil's eye in normal movement of the head while working. If the pupil faces the desk with his left side to the window, his writing paper will normally be to the right of the center of the desk. From the illustration it may be seen that light striking the paper in this position will be reflected beyond the eye level range. Therefore, no glare will result.

Now, if the pupil has his right side to the window, the paper will be on the side of the desk nearest the window. Light striking the paper on Desk A will be reflected directly into the eyes of the pupils. This will cause glare and in extreme cases the pupil will be unable to read his writing. However, Desk B is far enough removed from the window so that the light is reflected beyond the eye and no glare is present.

Diagram 2 illustrates a similar condition of indirect glare which is present when the pupil faces the light. Desks A and B are too close to the window, while Desk C is sufficiently remote to eliminate glare.

Indirect glare can be eliminated, therefore, by placing the desks at a sufficient distance from the window. Variations in window heights and desk sizes will affect the figures indicated on the diagrams. Referring again to Diagram 3, no pupils should face the light in Area C or D. Right

hand lighting in Area D will produce glare. Area E is poor for seating in any direction. Diagram 4 shows the conditions existing when the room is lighted from three sides. The arrows marked "G" indicate that the pupil will receive glare from the working surface if seated facing in the direction of the arrow.

The advocates of bilateral lighting rest their case largely on the increase in illumination in the classroom and corridors. It is interesting to note the importance of this factor.

Diagram 5 is a section of a classroom 24 feet wide. Curve A indicates the drop in the intensity of illumination received from the left window provided unilateral lighting is used. The illumination of desk surfaces 4 feet from the window may range from over 100 foot candles to zero depending on the natural sky light. If the intensity 4 feet from the windows were 100 foot candles on a bright day, the intensity at the center of the seating area would be 11 foot candles and that on the corridor wall side would be approximately 4 foot candles, not considering additional light reflected from wall surfaces. Therefore, the illumination on the side of the room away from the windows would be inadequate.

Curve B of Diagram 5 illustrates the condition existing when outside windows are placed on the two long sides of the room. In this case adequate illumination is obtained over the entire room with considerable leeway for cloudy days.

Sole Use of Corridor Windows

Diagram 6 indicates that corridor windows are of no value in supplying additional light to the classroom. If the corridor walls were built entirely of glass, the light from the windows in the classroom across the corridor would be reduced to little more than one foot candle when it reached the desk nearest the corridor wall. If the corridor window sills were more than 3 feet high, or if the corridor windows were more than 3 feet from the floor, no direct light would be received by the desks nearest the corridor.

It is obvious, therefore, that corridor windows are of little value in increasing illumination in classrooms. They are only of value in lighting corridors. It should be pointed out that corridor windows prevent the installation of reflective wall surfaces. Under such conditions the windows may actually decrease the classroom illumination.

Diagram 7 is a floor plan of a classroom 24 feet wide and 32 feet long with windows to the left and rear. For purposes of comparison it is assumed that on an overcast day adequate illumination is secured with unilateral left hand lighting only up to points 9 feet from the window as indicated by unilateral line No. 1. Under similar conditions of outside light, a bilaterally lighted room would receive the same intensity of light over Area B as well as Area A, as indicated by the bilateral curve No. 1.

Bilateral Lighting

Now, if it were a bright day out of doors and if adequate illumination were present in the room up to unilateral line No. 2, then the addition of rear windows would provide adequate illumination up to the bilateral curve No. 2.

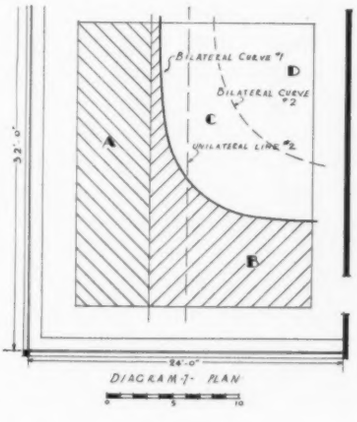
From the diagram it may be seen that by placing windows in the rear of the room in addition to those on the left wall almost twice as much area is provided with adequate illumination as would be the case with unilateral lighting.

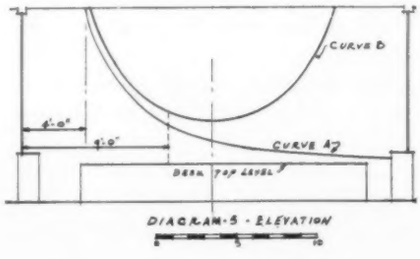
It has been claimed that corridor windows offset the light absorption of corridor wall chalkboards. In a room 24 feet wide and 12 feet high with left windows extending to within 4 inches of the ceiling, it may be shown that only a small longitudinal portion of the corridor wall is responsible for the major light reflection. This section of wall begins at desk level and extends upward less than 3 feet. Thus, the portion of the wall which is most valuable from the point of view of light reflection is below a line 5½ feet above the floor. Any chalkboard would use up most of this space so that the reflective value of the wall surface would be practically zero.

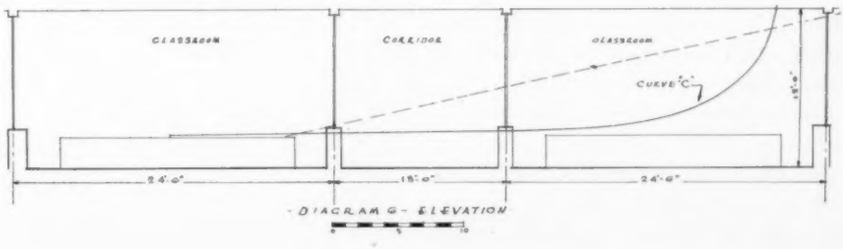
Proper Placing of Chalkboard

If a wall of 70 per cent reflective value were substituted for the chalkboard, and the light striking it were approximately 3 foot candles, then the reflected light value would be 2.1 foot candles. Previously it has been shown that only 1 foot candle can possibly enter through a corridor window, and that high corridor windows are of much less value. Therefore, when rooms are placed on both sides of the corridor, it is better to provide wall surfaces of a high reflective value to a height of at least 6 feet. Above that level windows may be installed to aid in lighting corridors. Nevertheless, chalkboard on corridor walls is definitely undesirable from the lighting point of view. Windows above chalkboard certainly do not offset the absorption of light by the chalkboard.

Of the other reasons offered in defense of unilateral lighting, the one pertaining to teacher eyestrain when







facing windows is probably most important. With the activity type of program in the classroom, the teacher is moving about continually and is seldom required to stand in the front of the room. It would, therefore, seem that the argument does not apply to present conditions.

The problems of exposures and architectural difficulties must be related to local situations. The question of injurious cross-lights would seem to be entirely psychological unless they cause glare or shadows. There may be some basis for this reaction in the desire of man to have protection on his right side. However, such a belief certainly can have no stand in modern education.

The statement that natural ventilation is more easily obtained with two exposures is obviously sound. Whether or not this would reduce the necessary amount of mechanical ventilation cannot be discussed within the scope of this article.

The choice between unilateral and multilateral lighting for classrooms will depend on the type of activity to be carried on in the room. The more progressive educational programs, utilizing movable furniture and offering a large degree of flexibility in seating arrangements, indicate a need for reconsideration of the basic reasons for present lighting standards.

When writing is a major activity in the classroom, it is necessary that the light of highest intensity come from the left or left-rear of the pupil. This desideratum can be achieved with multilateral as well as unilateral lighting provided all desks do not face in one direction.

Other activities, such as reading and general work not requiring left hand lighting, may receive higher intensive and more cheerful atmosphere with multilateral lighting.

When multilateral lighting is used, pupils should be taught to arrange their desks in such a manner as to eliminate shadows and glare. With few exceptions, pupils should not face the light. This is especially true when they are seated within 8 or 10 feet of the window.

Multilateral lighting overcomes the deficiency in illumination common in unilaterally lighted classrooms. This factor is of considerable importance in reducing eyestrain and fatigue.

Windows in the wall between classrooms and corridors serve only to provide light for corridors. This window area reduces the reflective value of the wall surface in the classroom and is, therefore, of questionable value. Chalkboards on the corridor wall side of classrooms are definitely undesirable because they absorb light over a critical wall area.

The usual type of construction with classrooms on both sides of the corridor limits the number of rooms in which bilateral lighting can be obtained to those at the building corners. Under such conditions classes should be arranged to receive the advantages of the increased illumination available at these points. To eliminate shadows, the intensity of illumination can be controlled by using suitable types of glass, translucent shades or blinds. In general all exterior wall surfaces may be used for illumination without regard for left hand or unilateral lighting. This conclusion is based on use of movable furniture and an activity program.

Formula for School Lunch Bread

By MARY C. KELLY

In Hartford, Conn., bread contracts are awarded annually by the cafeteria committee of the board of education from competitive bids, on specifications of the business manager and the cafeteria director. For many years, a disinterested committee of local home economists judged samples and every effort was made to consider "quality" (an illusive term difficult to define). The results were often unsatisfactory to both the dealers and the schools, and in search for a definite gauge of value, there was discovered the formula for school lunch bread devised by the Bureau of Home Economics.

Research departments of the bakery industry and its allied trades were contacted and complete and helpful information was received. Arrangements were made to have bakers, in private employ, test each formula as received, making a careful study of their success in each case. The conclusions were then presented to bakeries interested in the school order, and they were urged to obtain further data and to make personal experiments. As a result bids now call for 12 per cent milk bread, with the following formula:

School Lunch Bread

Flour	100 lbs.	Powdered skim milk	12 lbs.
Water	70-75 lbs.	Yeast food	4 ozs.
Sugar	4 lbs.	Malt	8 ozs.
Salt	2 lbs.	Yeast	2 lbs.
Shortening	2 lbs.		

Thus at competitive cost, the school cafeteria director receives a dependable, nutritious product made from a formula that permits analysis. She makes a contribution to the nutrition of the local community because institutions and housewives are eager to find it in the market. She assures the bidders of fair and equal treatment.

Possibility of obtaining a satisfactory analysis is equal in interest to control of ingredients. A recent report from a chemist states: "The average composition of the bread in the fresh condition as received is: moisture, 35.5 per cent; ash, 2.15 per cent; protein, 10.5 per cent; fat, 2.5 per cent, and skim milk solids, 9.9 per cent. The analyses show (1) that the bread furnished is of standard quality so far as nutrient solids are concerned, and (2) the skim milk solids present appear to be not less than indicated by the formula and quite uniform in the several samples." This is a marked improvement over reports on regular bread previously received.

The opportunity to study the subject of bread and to include the formula in our bids is due in no small measure to the interest which the superintendent of schools took in the subject.

In the last analysis, members of the cafeteria committee of the board of education had the responsibility for making this departure from previous policy. They have taken a keen interest in the results obtained.

Control and Storage of Supplies

By CHESTER F. MILLER

A SUPPLY department is more than a mere mechanical organization to distribute supplies. Its policies, its inventory, its service all are contingent on the educational program. Changing conditions must necessarily modify needs. The personnel of both supply and purchasing department must not only understand the requirements of the educational program but be sympathetic with it. Understanding the modern educational program enables the storekeeper to salvage much material often wasted or discarded which can be utilized in schoolroom instruction. The utilization of shipping cartons and other types of materials often discarded as junk draws out the ingenuity in children when made available for units of work.

Staff Makes the Department

First, then, a supply department must be staffed with persons understanding and human. "What is best for the children" should be their slogan because they have a place in the school organization for the one purpose of serving the needs of children.

At Saginaw, Mich., we were faced with a problem. Two school districts in a city divided by a river recently had been consolidated. The personnel of two business departments remained. Supplies were stored in seven different places on either side of the river. Before making recommendations the procedure of supply departments in many cities was studied. Valuable suggestions resulted from each visit. Not one procedure entirely fitted our needs and ideas. Because we were going to plan a supply department from the budget to the classroom with definite controls we started by evaluating each department visited. We asked ourselves these questions: (1) What is the cost per capita of handling supplies? (2) What are the demands of this plan in personnel, clerk hire, records? (3) What improvements are realized over other plans? (4) Is the control effective from the standpoint of economy? (5) Does classroom instruction benefit?

Principals and teachers were also asked for an evaluation.

When comparing costs one must compare the services performed. The method of supply management depends entirely on the administrative organization. Controls and standards of consumption are necessary or more aggressive individuals will have all the supplies, and budgetary control will be almost impossible. Comparisons between cities in the extent of free supplies furnished are under constant change. Not only do requirements differ by schools but by grades. As the curriculum and techniques of instruction change the supplies also change. Variations in practice between cities center about the much debated question of storage in central warehouses or in school buildings.

The exponents of central warehouse claim: (1) more efficient control; (2) less money invested; (3) lower insurance costs; (4) less waste; (5) greater safety of materials; (6) fewer losses because of rodents, leaks, etc.; (7) better and safer storage of explosive and inflammable materials; (8) a more equitable use of supplies, and (9) less total space for storage.

Although each school system must in the end set up a supply control to fit local needs, the superintendent of schools at Saginaw, Mich., presents ideas garnered in studying the plans of other schools and in revising his own procedure.

Exponents of school building storage claim: (1) economy in handling and delivery; (2) just as efficient control; (3) supplies available when needed, and (4) less trouble to the administration.

A decision cannot be made on the problem of storage without considering the frequency of delivery. Multiple deliveries are used in 90 per cent of the larger cities and 63 per cent of the smaller school systems. In fact, approximately two-thirds of all schools have multiple deliveries. In all cases regular schedules are set up ranging from once a week to once every two months. Schedules are usually staggered to keep trucks and men continually at work.

Effects Ten Economies

The following economies are claimed for multiple delivery: (1) extravagance discouraged; (2) less deterioration; (3) less space devoted to storage; (4) lower inventories, larger turnover; (5) advantage gained from market fluctuations; (6) fresh clean stock ensured; (7) redelivery eliminated; (8) less carry-over; (9) hoarding of supplies discouraged; (10) better check on supplies.

The disadvantages of multiple delivery are: (1) questionable buying advantage; (2) increased overhead; (3) increased back ordering; (4) arrival of supplies at busiest rather than at slack times; (5) interference with the school, and (6) greater cost.

After spending a year studying our own and the plans of other school systems we did what every system must do — worked out a plan to fit our own situation.

We furnish all the supplies, textbooks and materials of instruction from kindergarten through high school—pencils, paper, tablets, paints, crayons, books, in fact, everything a child uses.

This procedure requires the purchase of some 3,600 different supplies. The parent furnishes nothing.

The purpose, object and rate of consumption of each article are studied in terms of use. The larger the number and variety of uses that can be made of the same article, the greater the economy. In the purchasing department a specification file is set up for each article. Every time a defect is found in the specification by the storekeeper which allows the delivery of an inferior article, a notation is sent to the purchasing department and this specification is corrected to avoid a repetition. After nine years we have built up a set of more or less "gypproof" specifications.

Committees were appointed to standardize paper sizes, considering cuts of greatest economy. All school forms are printed in print shops of the trade school but all forms are standardized. In order to have a new form entered in the standard form control book it must be accompanied with reasons for change and reasons why the old or another approved form cannot be used. In a similar way all supplies were standardized.

"Dummy" Budget Saves Time

The next step was to set up per capita allotments for supplies. The reader may wonder what allotments and the budget have to do with the handling of supplies. Our plan is based on control from budget to the consumption of supplies. Each principal is furnished with a copy of what we call a "dummy budget" containing blank forms and directions for making the budget that is prepared in conferences of principals. With this "dummy budget" is a complete list of standardized supplies all priced and set up by per capita allotments.

Sufficient loose forms corresponding to those in the "dummy budget" guide to supply each teacher are also furnished. Teachers then make requests to principals. Any variation from the standardized supplies and any requests in excess of allotments, experiments in instruction or special plans a teacher may have are requested for survey and approval. When all requests are returned to the principal's office they are tabulated and assembled and the pages numbered in the same order as the "dummy budget."

When budgets from all buildings come to the business office it is a simple matter to check and tabulate pages numbered alike with items in the same order. After approval of the budget by the board of education, allotments for each supply and school are entered on the stockroom sheets. Principals also check the budget they submitted against the budget newly allowed by the board of education and correct their building budget to agree with the business office and stockroom set-up for the next year.

How the Supply List Controls

When the central warehouse was arranged all precedent was discarded. Supply bins were arranged in the same order as articles are listed in the "dummy" control budget and allotment lists. In requisitioning supplies it was thought that the principal naturally would turn to the budget supply list when requisitioning supplies. Then the supply list would control and articles could be stored in the same order as listed.

This is just what happened. Bins sized to varied supplies were properly labeled and erected so a rubber-wheeled truck could be pushed along between them. The truck since has been abandoned. The baskets used on the delivery trucks have runners, making it possible to insert a hook with rope attached in the handles and to skid them along the floor. When an order is filled the basket is at or headed toward the loading platform. This takes care of all small and single package articles. A room on the other side of the loading platform is used for bundle storage. Large schools receive bundle deliveries. When requisitions from large schools do not call for articles of standardized supplies in bundles the requisition is raised or reduced fractionally to bundle delivery.

Janitor supplies are likewise budgeted, standardized, binned in order and controlled by per capitas. Circulating sets of books are handled in boxes with tags attached.

From time to time changes in instruction call for a change in supplies leaving some old materials on hand. Instead of allowing such materials to accumulate in the stockroom, and eventually becoming a loss, a list of "dead" material, with a description or sample, is prepared and sent to the various schools. Always some principal or teacher has an idea for the profitable use of such material. In this way the stockroom carries only live material on its shelves.

We believe this method has led to the development of instruction with worthwhile educational values. Economy in the use of supplies is not economy if supplies necessary to efficient instruction are curtailed to the extent that they interfere with instruction. But the elimination of waste, the efficient business handling and control of supplies are obligations of the administration.

Through such plans we have reduced supply costs 50 per cent, but not because of depression prices. We have improved instructional services at the same time and actually have given the children more usable supplies than under the old system. Frequent per capitas on paper towels, soap, water and electricity not only reveal losses that should be eliminated for economy but locate conditions that enable lessons in training for citizenship.

By far our most valuable check is the annual distribution sheet of the per capita cost of each supply and service, by buildings. This serves as a rapid administrative key to out-of-line costs. Low costs usually indicate a teaching condition in which children are not receiving the material necessary for proper instruction. We are working for a well-balanced supply program in which supplies will function properly in the educational program our resources permit.

New Rôle for Erasers

Another use has been discovered for blackboard erasers. Substituted for the brushes in floor treatment machines, they make excellent buffers. Such procedure is possible, of course, only as applied to those machines in which the small segmental brushes are used. When the brush is one solid disk, ordinary burlap sacking placed under the brush will do the trick, doubled so as to give about four thicknesses. Nothing is better, according to those who have experimented, for removing dust and water tracks. Such treatment keeps the floors looking as though they had been newly waxed.

Milk for Variety

By MABEL G. FLANLEY

EACH year's school program justifies a discussion of the proper feeding of pupils in the schools and of methods of operation that may reduce lunchroom costs. There are ways by which the school child may be delighted and, at the same time, a cut effected in the cost of maintaining the lunchroom. These ends frequently may be accomplished by finding heretofore undiscovered variations in the use of milk.

Milk long has been accorded a position of basic importance in the school lunch. Doctors, dentists, nutritionists and home economists all have stressed the necessity of depending upon the noon meal to furnish its substantial share of the daily quart of milk recommended for the well-being of every growing child. But has it been given its rightful place as the means of changing a prosaic luncheon into an appealing one and of transposing those red figures in the cost book into black ones?

The cost of foods is the problem that most often faces the lunchroom manager. Milk has a way of stretching other foods and at the same time making them tastier. For example, ham left over and ham hock trimmings and cold boiled potatoes, rice or macaroni, combined with a chopped onion and some browned buttered bread crumbs and blended and baked with a thin cream sauce, may become a delicious main dish at small cost. Creamed hard cooked eggs served on toast or crackers, sprinkled with grated cheese, a dash of pimiento or chopped parsley makes a treat as well as a substantial dish — and again serves as a "stretcher" of foods.

Since the principle of the school lunch is to be self-supporting but nonprofit making, the cost of foods in relation to their nutritional value is the primary problem facing the lunchroom manager. Milk, ranging at the top of the list of protective foods, should be dispensed at cost or slightly above cost in order to obtain the objective of every child consuming his portion of this essential food. Lunchroom profits should come largely from the sale of nonessential or less essential items in the diet.

Just a word about that cost. In most localities milk is sold to schools at a price that allows for a minute profit and, in many cases, no profit at all. Is it not then an obligation of the school lunchroom, whether it be a concession or a school enterprise, to pass this essential food on to the school child at the lowest possible price to put it on an even penny basis?

The ideal situation is the one in which good, fresh, pasteurized milk is available in half-pint containers for use in every school lunchroom at a figure that permits its purchase by every child. But, fortunately, milk is available in a variety of forms to suit the buying powers of any lunchroom. If the children in a school have only a minimum amount to spend, the manager will continue to supply milk in the lunchroom, but in a less expensive form.

Milk in any of its forms should be purchased with the same careful selection given all other food products. The fresh milk supply for any school should come from the best available source to be certain that its quality is unquestionable. Two avenues of procedure will assist in guiding the lunchroom manager in the selection of the dairy to serve the school: first, an inquiry of the local board of health regarding the standing of the dairies under consideration and, second, a personal visit to the plants to view the methods of handling and the cleanliness of the premises.

When purchasing powdered whole milk, it is well to purchase a standard brand. A number of manufacturers make powdered milk only when the butter market is low and when they have a surplus of butterfat. Others manufacture powdered milk the year round as a regular part of their business and have the proper equipment and supervision to produce a year round uniform product of high quality.

Powdered whole milk is packaged in various sized containers. For the average school a 50 pound or 85 pound drum would be the appropriate size. It is packaged in both "vacuum sealed" and "friction top" drums. In southern climates, it is well to use vacuum sealed containers; this practice assures the lunchroom manager that the milk will arrive in perfect condition. In cooler sections, friction top drums can be used successfully and the difference in packing cost, amounting to about 2 cents per pound, can be saved. One pound of powdered whole milk with 7½ pints of water makes a whole milk equivalent to fresh milk with 3.3 per cent butterfat.

Evaporated milk has between 50 per cent and 60 per cent of the water removed in processing. One 14½-ounce can of evaporated milk diluted with 1 quart of water is approximately equivalent to 1 quart of fresh milk with 3.5 per cent butterfat. Evaporated milk, if used in large

The Health Store was a popular project in one of the Philadelphia elementary schools recently. Below, first grade pupils at West Hartford, Conn., have erected a cafeteria unit. Milk heads their foods list.

quantities, can be purchased in gallon (No. 10) cans. Many standard brands of evaporated milk today have the added advantage of irradiation. Irradiated evaporated milk may be had at no added expense and provides an additional source of Vitamin D.

It should be borne in mind that all milk requires care in storing and handling. Fresh bottled milk or bulk milk for cooking uses should be properly refrigerated or kept iced until ready for use. If there is no means of refrigeration, arrangements should be made for delivery as close to the time of service as possible so that the milk will remain cold until it is served. Evaporated milk, before it is opened, can be stored easily under any conditions. However, as soon as the can has been opened it demands the same care and attention that is given to fresh milk. Powdered milk should be stored in a cool, dry place, but not on ice. Moisture is the element that one must guard against to prevent contamination. Bacteria will start to propagate as soon as the moisture content reaches 4 or 5 per cent. Powdered milk should be purchased in small enough quantities that the supply will be completely utilized within

two weeks or three weeks, even under the best conditions for storage.

Just a word about the temperature of serving. Every food manager knows that one of the keynotes of good service is to serve cold foods cold and hot dishes hot. With milk and milk dishes this is particularly important. Slightly warm milk as a beverage is sufficiently unpalatable to dissuade the school child from any desire to consume it in the future. The most tempting dishes made with hot milk or cream sauces become entirely insipid when served lukewarm.

Whether milk is served hot or cold, all utensils must be unquestionably clean. If urns are used for dispensing milk drinks, the utmost care should be observed in their selection. No pipes with elbows that may not be unscrewed, no seams and corners that cannot be cleaned should be accepted. No metals susceptible to corrosion or capable of imparting flavors should be tolerated. Meticulous daily care should be given to any urn used for dispensing milk drinks.

Milk, like most natural foods, possesses a mild flavor. Milk drinkers do not tire of it. Perhaps the greatest problem in the substitution of evaporated and powdered for fresh milk for beverages is the flavor, which is objectionable to some persons. The introduction of suitable flavors for use with these milks is the point where the ingenuity of the lunchroom manager has full sway. From infancy up, the importance of the child retaining his appreciation of natural food flavors is stressed. Flavors do not have to be sweet to possess an appetite appeal. Constant use of highly flavored and sweetened milk may quickly dull appreciation of the natural mildness of fresh milk. Flavored milk, then, should be used to give more variety and greater appetite appeal to modified milk, but at the same time should leave a greater respect for a chilled glass of fresh milk.

Occasional variety may be interjected into the service of fresh milk. If chocolate milk is offered one or two days a week rather than daily, as it is in some schools, it will retain its surprise element. Occasionally, as a special treat, a small paper soufflé cup with soft jelly or crushed pineapple may be served with the usual half-pint of milk. The child can add this to his milk as he pleases and stir it with his straw. Another suggestion for some special occasion is that of serving an old fashioned stick of peppermint candy to be used with the milk instead of a straw.

However, if the occasional becomes the usual, it loses its appeal. Consumption is likely to fall off with the risk that this may ultimately effect the consumption of all milk. Each lunchroom should be considered as a special experimental problem and the effect of any new departures studied in its relation to child welfare.

Some of these recipes may offer a variety in lunchroom beverages.

Stock Syrups

Grape Syrup

1 quart grape juice, 1 pound sugar.

Vanilla Syrup

1½ cups sugar, 2 cups water, 2 teaspoons vanilla.

Strawberry Syrup

1 pound fruit, 1½ cups sugar.

Raspberry Syrup

1 pound fruit, 1¼ cups sugar.

For any one of the foregoing syrups, boil ingredients together for five minutes. Pour into wide-mouthed bottle, cover and store in cool place.

Stock Caramel Syrup

6 cups sugar, 4 cups boiling water.

Put sugar into heavy saucepan and place over heat. Stir constantly until amber colored liquid is formed. Cautiously add boiling water. Simmer until caramel is entirely dissolved, stirring frequently. Pour into wide-mouthed bottle, cover and store in cool place. Yield: 4½ cups.

Stock Cocoa Syrup

½ pound cocoa
2½ cups sugar
½ tablespoon salt
1 pint boiling water
2 egg yolks
2 teaspoons vanilla

Mix cocoa, sugar and salt together, add boiling water gradually, stirring continuously while adding. Place mixture in top of double boiler and cook over hot water for thirty minutes, stirring occasionally. Pour over slightly beaten egg yolks. Cool and add vanilla. Place in wide-mouthed jars and store in cool place. Yield: scant 2 cups.

Fruit Drink Made With Stock Syrup

3 cups stock syrup, 5 quarts fresh milk or 2½ quarts evaporated milk and 2½ quarts water, or 5 quarts water and 1¼ pounds of powdered whole milk.

Measure desired amounts. Add milk. Beat or whip well. Yield: twenty-five 7-ounce servings.

Cream Soup Base

1

½ gallon cold water
½ pound whole powdered milk

2

½ cup flour
⅔ cup cold water
1 tablespoon salt
3 tablespoons butter

3

1. Place powdered milk on top of water. Stir with egg whip into smooth solution.
2. Make a smooth thin cream. Add to boiling milk and stir until it begins to thicken. Add vegetable for kind of soup desired. Bring to good boil. Remove from fire.
3. Stir in butter.

Cream of Tomato Soup

1 No. 10 can tomatoes
1 slice onion
Few stalks of celery
½ tablespoon baking soda
1 quart meat stock or water

Cook until tomatoes are soft and mushy. Strain through sieve and add gradually to cream base. Yield: 25 servings.

Tomato Whip

2 quarts tomato juice
1 cup lemon juice
4 quarts fresh milk or
2 quarts evaporated milk and 2 quarts water, or
1 pound powdered whole milk and 3½ quarts water
1 cup sugar
½ teaspoon salt
Dash of nutmeg or cinnamon

Combine ingredients and mix well for one or two minutes. Serve cold. Yield: twenty 8-ounce servings.

King Milk

1 gallon fresh milk or 2 quarts evaporated milk and 2 quarts water, or 1 pound powdered whole milk and 3½ quarts of water
6½ ounces vanilla syrup
12 eggs
1½ quarts ice

Mix well until ingredients are thoroughly blended. Yield: twenty-five 8-ounce servings.

Cranberry Milk Shake

2 quarts milk, or 1 quart evaporated milk and 1 quart water, or ½ pound powdered whole milk and 2 quarts water
4 quarts canned cranberry juice

Pour cold cranberry juice into cold milk slowly, stirring constantly. Yield: twenty-four 8-ounce servings.

Fruit Milk Shake

1 quart banana pulp (8 bananas)
1 quart orange juice
1 pint lemon juice
1½ quarts canned pineapple juice
1½ quarts evaporated milk

Yield: twenty-five 7-ounce servings.

Prune Nog

3 quarts fresh milk, or 1½ quarts evaporated milk and 1½ quarts water, or 12 ounces powdered whole milk and 3 quarts water
4½ quarts juice from stewed prunes

Juice from canned prunes may be used; chill milk and prune juice. Mix ingredients and shake well. Serve cold. Yield: thirty 8-ounce servings.

The use of the school lunch as an educational medium may and should be closely tied to classroom activities. The effect of a carefully directed educational program emanating from a

school lunchroom can become even communitywide, bringing each resident an interest in his nutrition.

No phase of a health education program lends itself to a greater variety of approaches than does the story of milk. Projects can be developed for history or geography classes in elementary grades. In the high schools, a logical approach can be made through bacteriology, economics, civics, industrial arts and home economic classes. The possibility of coordination with art classes in making health posters should not be overlooked.

In one Philadelphia school the children built a health store. These elementary children have been interested in their nutrition in such a way that the home and the school will be drawn closer together in the solving of the common problem.

School children in West Hartford, Conn., were shown the value of right food selection by the actual reproduction of a schoolroom cafeteria.

Good salesmanship plays an important part in assuring the selection of a good lunch. Health posters on display in the corridors approaching the lunch counter produce good results. Attractive posters on milk right at the milk counters will increase sales. A check-up in the classroom on lunch selections may be most effective. A bulletin board may be maintained in the lunchroom; the class showing the highest percentage of "A" lunches selected during the previous week may be allowed to furnish the material on display during the ensuing week.

The lunchroom manager may be a part of the school system or she may be "commercially" employed, but if she is doing her job well, she can become a vital force in an educational phase that will permeate the school.

FOOD FOR THOUGHT

• The problem of handling cafeteria personnel demands close adherence to certain rules, according to Dr. Mary de Garmo Bryan, head of institution management, Teachers College, Columbia University, and editor of the school feeding section, The NATION'S SCHOOLS. In a talk before the North Eastern Ohio Teachers Association meeting of school lunchroom managers and directors which took place in Cleveland, Doctor Bryan urged attention to the following procedures: (1) classification of employees; (2) standards of employees; (3) case-job analysis; (4) medical examination given by school physician and constant observance by the manager; (5) supervision of employees to maintain standards; (6) setting of wages with regard to local wage scales (the trend seems to be to pay good wages for working day only); (7) carrying of employee insurance, possibly including medical care, and (8) purchase and laundry of uniforms for employees.

Definite trends that make for efficiency in a school lunchroom are discernible Doctor Bryan pointed out. The first is parents' agreement on importance of health maintenance. The concessionaire is (thanks to the depression) on the way out. Then there is cooperation of other organizations with the school. In many rural schools working with the cafeteria is the parent-teacher association. Some organizations provide money for feeding the indigent. Finally, there is either a full-time manager or the establishment of the cafeteria under home economics management. If the latter is the case, three to four periods, depending on the size of the lunchroom, should be allowed for cafeteria work. The trend is toward a home economics trained manager.

The part that the school cafeteria plays in the educational program was emphasized by Doctor Bryan. "There is a growing realization," she said, "that the cafeteria is an important teaching medium. Both food selection and employee responsibility may be taught here.

"There is a definite tie-up with other departments on the teaching program. For example, in the art department, there may be poster work on foods; in the social science department, the study of supply and demand for food; in health education, subjects ranging from foods to communicable diseases are discussed. There is a good opportunity for work with the business department. The cafeteria may contribute to the social education of the child. In Milwaukee there is a cafeteria council made up of one representative from each homeroom in the schools. It sets rules of student conduct, suggests special plate lunches, manages recreation during lunch period and supervises waste disposal."

• Welfare projects, hot lunches and milk distribution to relief children, of St. Paul, Minn., and Ramsey County, totaled $16,730.97, according to the annual report of the board of public welfare of the city and county.

The two projects were sponsored by the department of education, under direction of Agnes Larson, home economics director. The St. Paul Community Chest, the Twin City Milk Producers Association, the Ramsey County Public Health Association and the American Red Cross contributed the fund used to purchase food and milk and acted as co-sponsors of the project. No funds were provided by the department of education.

• Consumer charts, prepared by the bureau of home economics of the U. S. Department of Agriculture, are available through the superintendent of documents of the government printing office. Food subjects covered are nutrition, child feeding, meat cooking, the convenient kitchen, composition of food materials, 100-calorie portions of a few familiar foods and household refrigeration. Some of these will be found suitable for the school cafeteria; the others for home economics classes.

• The value of oil silk for many purposes is an old story, but its use in pouches for keeping food fresh and crisp and as covers for dishes is fairly new.

These devices are waterproof and transparent; they are easily washed, can be piled in a small space when not in use and do not tear easily. They do away with the breakage of covers that causes so much annoyance. The silk is not affected by heat or cold and it is acidproof. Both pouches and covers are made in many sizes.

The pouch opening is bound with strong tape and is equipped with a rustproof zipper fastening which closes it tightly. This provision prevents evaporation, with consequent drying out of food, and the food is protected from dust and similar contamination. There is no interchange of odors in the refrigerator or cupboard and one can see at a glance what is in each container. In the school lunchbox sandwiches, cake, fruit and even salads packed in these bags remain fresh and appetizing.

The covers have an elastic band on the edge that fits snugly over the rim of the dish. They afford a simple means of preserving anything from a small dish of left-over food to a bowl of dough for icebox rolls or cake. The jelly glass size is handy for an individual custard or gelatine dessert. One of these covers slipped over a cut piece of apple or orange before putting it into the icebox will keep it fresh for several days.

The pouches are also useful to protect books one must carry on a rainy day.

Old Toilets Go Modern

AFTER

BEFORE

In six Chicago elementary schools modern equipment has replaced the open trough, wooden seated toilets that were still in use in early 1937.

By NORMAN J. RADDER

AS A SCHOOL building grows older a point is reached at which patching, repairing or partial replacement will no longer maintain it up to what is generally recognized as a minimum standard. True, the nonmechanical parts of the building will more than likely last by virtue of maintenance. Floors may be patched satisfactorily, walls may be replastered successfully, or a coat of paint may transform the appearance of rooms. But at some time the mechanical equipment must wear out and only complete replacement will restore the service required of it.

Under the classification of mechanical equipment come the school toilets. Actually they are semimechanical. Too often they are repaired time after time and kept in use long after they should have been replaced. Were inconvenience to pupils the only resultant effect, conditions of this sort might be put down only as unfortunate. However, the sanitary aspect comes into the case along with stu-

Urinals in boys' toilet room in one of six Chicago schools after modernization last summer. Sanitary, impervious, stainless and non-absorbent vitreous china has replaced the absorbent and insanitary slate. The old toilets were trough type.

BEFORE

AFTER

dent health. Thus, in some schools, at least, health protection activities might well be more evenly divided between the rooms marked "Boys" and "Girls" and that marked "Doctor's Office."

Chicago, during the past summer months, replaced toilet facilities in six primary schools. These buildings are upwards of thirty-five years old and have enrollments of about one thousand each, or six thousand in all. The project was financed with $50,000 appropriated from regular board of education funds.

Accommodations Required

One of the first steps in modernizing is fixing the adequacy of the new toilet rooms, that is, providing for present enrollment, possible increases or for additional outside buildings. Presumably, of course, if the original builders provided for the present building at capacity, the number of toilets is still adequate unless overcrowding exists. Once the proper number is determined, the problem is merely one of selecting the most practicable plumbing fixtures and modernizing the rooms up to present day standards.

The Chicago board of education has more or less definite rules for determining the adequacy of toilet facilities. These rules were formulated from surveys made by the Chicago board of health over a period of time. Some flexibility in these rules is necessary in a city so large, since the Chicago school district includes high schools with enrollments running into the thousands as well as one-room primary schools with a handful of younger children.

For the average-sized school, such as the six that were modernized, adequate toilet facilities are fixed on the basis of classrooms of forty-eight pupils. Water closets are provided for girls on the basis of 1.2 closets for each ground floor classroom and 1 closet for each upper floor classroom. Urinals are provided for boys on the same basis. Water closets are provided for boys on the ratio of two closets for each six classrooms, but never less than two per toilet room.

Replanning the Rooms

Lavatories in the six modernized schools were installed on the basis of two for every toilet room. The lavatories are made of vitreous china, which is a stainless and impervious material easily cleaned. They are equipped with hot and cold, chromium-plated faucets of the self-closing type for water economy. Bowls are equipped with stoppers on chains. In replanning the rooms a number of considerations were taken into account in the six schools. No actual change in room dimensions could have been made without extensive structural changes in the buildings. The existing room area had to accommodate increased facilities. For the most part, economical use of floor space was accomplished in these Chicago school buildings by installing water closets and urinals back to back wherever possible. This obviously made for considerable economy in both piping and floor space.

Further economies in both expense and floor space were made by new and improved methods of connecting the waste pipes to existing sewer lines. However, let it be emphatically urged that such technical short-cuts be left entirely to the discretion of a licensed master plumber, experienced in sanitary engineering. The disastrous amebic dysentery epidemic in Chicago during 1933 indicates what may happen if unqualified persons are permitted to do plumbing work. Investigation by the Chicago board of health showed that handymen and other inexperienced men had been allowed to alter the plumbing system in two large hotels. Through their lack of knowledge of the hydraulics and pneumatics of the plumbing system, cross connections between sewer and drinking water pipes were made. The result was pollution of the drinking water and an epidemic that caused the deaths of nearly 100 persons and the serious illness of more than 1,000 persons.

Type of Seats Selected

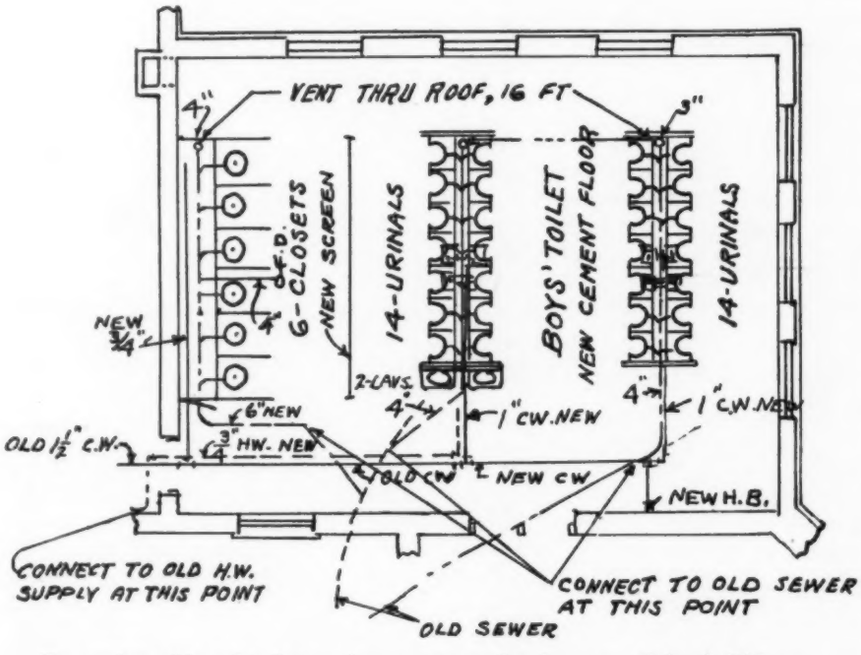
The fixtures installed in the modernized school toilet rooms are of a type especially designed for public school use. The toilet bowls are elongated in shape and are fitted with open front seats. Both are so designed for obvious sanitary reasons. Toilet seats are open front style, constructed of a black composition material which is both sturdy and sanitary. Urinals are of the full length type, set into the floors. Both toilet bowls and urinals are made of vitreous china, a ceramic product that is stainproof and easily maintained in sanitary and sightly condition.

A particular point of floor space

economy was made in planning these new rooms because of the screen and partition requirements of the Chicago board of education. It is required that each bank of toilets, or in the boys' rooms the toilets and urinals, be screened off from opposite banks by a high steel screen. As these naturally bisect floor space between banks of toilets, any saving in floor space was useful. Incidentally, the practice in Chicago schools, particularly in the girls' toilet rooms, is to provide steel partitions between each water closet, but without door in the grammar or primary schools. Steel partitions with door and catch surround each toilet in the high schools.

Another new feature that may be noted from the accompanying before-and-after pictures is the absence of flushing tanks on top of the partitions. These have been concealed between the two partitions that separate the banks of water closets. New concrete floors were laid in all remodeled rooms. White glazed tile is the standard wall finish in Chicago schools, and several of the rooms in older buildings received this treatment. Ventilation and lighting equipment were adequate, as these had been reconditioned recently.

Thus some six thousand Chicago school children returned in late September to a far better school environment than they left last June. They still study in rooms only as young as a coat of paint can make them after thirty-five years of hard use. But at least six thousand children will no longer learn high American principles upstairs while sub-American sanitary conditions meet them below stairs.



Floor plan of boys' toilet replacements at the Jungman School, Chicago, by John C. Christensen, board of education architect. Urinals were installed back to back for economy in both floor space and piping.

Who May Call a Fire Drill?

By the time winter comes, children should be so well drilled in school exit that it will not be necessary to hold frequent fire drills during stormy and inclement weather. Once a month, however, is not too often to hold a fire drill even during the bad winter months in the North.

Statutes in a number of states require at least a monthly fire drill in the schools. Among these is Iowa, where in Sioux City Supt. L. W. Feik and the board of education encourage authorized persons to call a fire drill at any moment.

The state fire marshal, city fire chief, any member of the board of education, the superintendent of schools, the principal or janitor of a building have the authority to call a fire drill in Sioux City. In fact, the superintendent urges members of the board of education to step into buildings and without warning call drills. This custom necessitates all buildings using the same signal—six quick, sharp taps of the fire gong or the sounding of the siren.

Sioux City principals are asked to check the following points:

1. Are all fire gongs in good condition for service? Are any ropes, wires or connections in need of repair? If anything is needed in this line it should be given first consideration and reported immediately to the secretary of the board of education.

2. Are all fire extinguishers in good condition for use? Note date of refilling and last inspection. If any of these need inspection and refilling report immediately to the secretary's office.

3. Are all doors in good working order so in case of fire drill or fire there will be no obstruction from the standpoint of locked doors or doors that do not open easily? Need of repair work should be reported immediately to the secretary's office.

4. Are all stairways and halls clear of obstructions?

5. Is there any material in hallways, under stairs or other places that is inflammable and therefore a fire menace? Observe where janitors keep all dust cloths, mops and cleaning material, and be sure that nothing of this sort is kept in a place that is either insanitary or a fire hazard.

6. See that the janitor thoroughly understands his responsibility in the matter of keeping the doors unlocked, hallways and passages clear of all encumbrances and all inflammable material where it is perfectly safe from the standpoint of fire and general sanitation.

The Iowa law requires that, in addition to at least a monthly fire drill, one lesson or discussion be given each quarter to the children on causes and danger of fire. The law also requires that all doors and exits of buildings be unlocked during school hours.

NEWS IN REVIEW • • • •

Chicago Trend Vocational

Alteration of Chicago's high school curriculum to place emphasis on vocational rather than on academic courses was announced in a plan advanced two weeks ago by Dr. William H. Johnson, superintendent of the city's school system.

The plan involves eventual replacement of 50 per cent of the present staff of academic teachers with instructors trained in vocational classroom work. No vacancies occurring through death, retirement or resignation will be filled by academic teachers, so that vocational teachers may be taken into the school system as fast as they can be secured. Only temporary appointments will be made to fill the present teaching schedule so as to facilitate removal of academic teachers from the school system without cost to the taxpayers.

Requirements for candidates for vocational teaching posts will be altered to require specific training before certificates are awarded.

Factory-type buildings are to be constructed adjacent to vocational high school buildings, under the plan, and five technical high schools, Lane, Crane, Tilden, Lucy Flower and Lindblom, will be converted into three-year schools. Pupils who wish to enroll in these schools will be required to spend the freshman year in other schools. The board of education has ordered negotiations of unfilled contracts for construction of two technical schools, on which work was stopped in 1930.

Trade Schools Are Studied

Negotiations for the proposed $2,250,000 trade school to be erected in Chicago's south side industrial district were started soon after the vocational curriculum was announced. John C. Christensen, school architect, and a committee were sent to the West Coast to study trade schools there. Doctor Johnson has proposed to build a central administration building for this unit, connected by corridors with a series of parallel factory-type buildings along one end of the property. Mr. Christensen has indicated he favors having the factory-type structures radiate from the central building.

It was said that the North Central Association of Secondary Schools and Colleges will be virtually deprived of supervisory control in Chicago high schools, since jurisdiction of the vocational set-up will lie directly under the U. S. Office of Education and the Illinois State Department of Public Instruction. Approximately one-half of the funds for operation of the vocational schools will be provided by the federal government under the Smith-Hughes Act.

Criticism has arisen because the emphasis of the new curriculum is entirely on the mediocre pupil, while the bright children and those who will go to college are disregarded. Doctor Johnson holds that only about 5 per cent of Chicago's high school pupils attend college and that much academic training is wasted because it has not ultimate practical value.

MEETINGS

Construction Council

At its fifteenth annual session in Columbus, Ohio, October 20 to 23, the National Council on Schoolhouse Construction elected the following officers: president, W. F. Credle, director, division of schoolhouse planning, North Carolina State Department of Public Instruction; vice president, Dr. Arthur B. Moehlman, editor of The NATION'S SCHOOLS, and professor of education, University of Michigan, and secretary-treasurer, Ray L. Hamon, professor of school administration, George Peabody College, Nashville, Tenn. The executive committee includes J. W. Brooker, director, school buildings and grounds division, Kentucky State Department of Education; George D. Coons, consulting architect, school building and grounds division, New York State Educational Department, and Frank Williams, director, division of schoolhouse planning, Oklahoma State Department of Public Instruction.

Recommends Lighting Standards

The council advocated high standards for classroom lighting, but did not endorse the recent trend toward unreasonably high light intensities being recommended by electric equipment and power companies and some illuminating engineers, on the grounds that these recommendations are not based on scientific research which gives sufficient consideration to the permanent effect on the eye.

The council endorsed the principle of federal aid for public works including schools and urged that Congress make liberal provision for aiding states and local communities in the erection of school plants that are much needed to relieve overcrowded conditions, to rehouse pupils when school units must be reorganized for efficiency, and to replace school buildings that are obsolete and unsafe.

Doyt Early, architect, division of schoolhouse planning, California State Department of Education, presented a paper on experimental color schemes that are being tried out in some California schools. He pointed out that, with artistic guidance and skilled painters, brighter and more cheerful colors might be introduced into the classroom.

H. W. Schmidt, supervisor of buildings, Wisconsin State Department of Public Instruction, presented a paper on the possibilities of glass blocks for school construction. Glass blocks, he said, seem to stand up under all the regular structural tests and do admit light. When laid in opaque mortar and restricted to that portion of the wall which is a satisfactory light source, these blocks do not admit as much light as conventional window glass, in his opinion.

Francis R. Scherer, superintendent of school buildings, board of education, Rochester, N. Y., who reported on modern construction, operation and administration of school swimming pools, outlined essential hygienic conditions for making school pools safe and healthful places for children. If pools are not scientifically constructed and operated, they do more harm than good in the majority of schools, he added.

Advantages of long-range planning were stressed in papers presented by specialists in school building and finance including Dr. Don C. Rogers, Chicago, Raymond V. Long, Richmond, Va., D. H. Sutton, Columbus, Ohio, and Mr. Credle, president elect.

Enrollment Figures Are Studied

G. E. Irons, assistant commissioner, division of records and special services, Cleveland Board of Education, in a paper on enrollment forecasting dealing with population trends and shifts, suggested some reliable methods of predicting enrollments. It seems that elementary enrollments have reached a maximum, but that high school enrollments are still slightly on the increase, he said. The principal problem of the school plant staff in the future will be to rehouse because of shifting population and reorganization, and because of inadequate and unsafe structures now in use.

The council heard a scientific explanation of the school building disaster in New London, Tex., from J. Fred Horn, director of the school plant division of the Texas State Department of Education. Mr. Horn placed the blame for the

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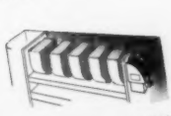

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THE OBSOLETE WAY

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MOLINE, ILLINOIS

explosion upon "common practice," which may be translated as the saving of a few immediate dollars regardless of ultimate economy and safety.—RAY L. HAMON.

Coming Meetings

Nov. 29-Dec. 1—National Conference on Educational Broadcasting, Chicago.

Dec. 1-4—American Vocational Association, Baltimore.

Dec. 2—Regional Conference, Progressive Education Association, Springfield, Mo.

Dec. 3-4—Regional Conference, Progressive Education Association, Tulsa.

Dec. 10-11—Nebraska State Teachers' Association, Lincoln.

Dec. 10—California Teachers' Association Conference on Education, Los Angeles.

Dec. 11—California Teachers' Association State Council of Education, Los Angeles.

Dec. 27-29—Pennsylvania State Education Association, Harrisburg.

Dec. 27-29—Illinois Education Association, Springfield.

Dec. 27-29—Ohio Teachers' Association, holiday meeting, Columbus.

Dec. 29-31—Oregon State Teachers' Association, Portland.

Feb. 10-12—Oklahoma Education Association, Oklahoma City.

Feb. 17-19—International Council for Exceptional Children, Buffalo, N. Y.

Feb. 26-Mar. 3—American Association of School Administrators, Atlantic City, N. J.

March 11-12—Junior High School Conference, New York University, New York City.

March 20-22—South Carolina Education Association, Columbia.

March 24-26 — Representative Assembly, Michigan Education Association, Lansing.

March 24-26—Alabama Education Association, Birmingham.

March 24-26—Florida Education Association, Tampa.

April 13-16—Kentucky Education Association, Louisville.

April 14-16—Georgia Education Association, Atlanta.

April 16—Massachusetts Teachers Federation, Boston.

April 19-23—Association for Childhood Education, Cincinnati.

June 13-18—American Library Association, Kansas City, Mo.

June 26-30—National Education Association, New York City.

New Organization Launched

Approximately 300 food service directors and cafeteria managers attended the first annual convention of the National School Cafeteria Association held in Chicago November 11 to 12. The association claims a membership in thirty-four states.

At the first convention the greatest attendance was, of course, from Chicago, with the South being the second geographical group in predominance. F. O. Washam, director of lunchrooms in Chicago, presided. Mr. Washam arranged the convention program, the four tours of Chicago schools, and the special luncheon, banquet and breakfast for delegates. Twenty commercial firms representing twenty types of cafeteria equipment accepted invitations to exhibit.

Among the speakers were Mrs. Alice R. Certain of Jacksonville, Fla., who advocated the central kitchen for serving a number of small schools; Bertha M. Smyers of Baylor University, where student entrance fees allow 25 cents a meal for food service, including salaries, at dormitories; Cora K. Loughridge, director of personnel and purchasing at Louisville, who told of feeding experiments for the undernourished from rich and poor homes; Sister Mary Aquinata of St. Xavier College, Chicago, where children from kindergarten to college are fed noon meals; Charles E. Lang, principal of Lane Technical High School, Chicago, where 8,000 boys eat daily, and Stella T. Patton, foods professor of the University of Wisconsin, who asked that school cafeterias be conducted on a professional rather than a commercial basis and urged cafeteria directors to accept as apprentices college trained women in home economics and institutional management.

Principal Lang looks toward a more economic use of cafeteria space in school construction, so that this large area will not remain idle for half of the day. He thinks that cafeteria service can perhaps be made available in a number of smaller rooms where a social program of some sort is possible during the luncheon period. The practice of hurrying the pupils out of the cafeteria in order to vacate their chairs contributes to the great American habit of bolting food, he believes.

A constitution and by-laws were adopted by the association, giving control to directors of cafeteria systems rather than to cafeteria managers. The next convention will be held in Chicago next autumn. Officers elected are as follows:

President, F. O. Washam, director of lunchrooms, board of education, Chicago; vice president, George Mueller, assistant secretary, school district of Kansas City, Mo.; secretary, Grace M. Moffett, cafeteria director, board of education, San Antonio, Tex.; directors: William Bradburn, director of lunchrooms, board of education, St. Louis; Berma L. Jarrard, cafeteria director, board of education, Atlanta, Ga., and Mrs. Bena R. Hoskins, cafeteria director, Fort Worth public schools, Fort Worth, Tex.

Attendance League Convenes

Four hundred administrators, attendance directors and social welfare workers gathered in Chicago, October 25 to 28, for the twenty-seventh annual conference of the National League to Promote School Attendance. The host to the convention was William L. Bodine, director of the Chicago Bureau of Compulsory Education, and founder of the league.

Important resolutions passed at the conference favored vocational education and all character-building youth organizations attempting to offset agencies destructive to the moral welfare of youth.

The league voted to hold its 1938 conference October 24 to 25 in Washington, D. C., and reelected its president, Martin M. Hihn, director of attendance, Baltimore, for another term. Raymond C. Koeple, director of attendance, Rochester, N. Y., was named first vice president; Lilian Batdorf, Chicago Bureau of Compulsory Education, second vice president, and Ben Peterson, director of attendance, Muskegon, Mich., financial secretary. Gertrude Hansen of the Chicago Bureau of Compulsory Education, was reelected secretary, and John B. Quinn, director of attendance, St. Louis, was renamed treasurer.

Food Service Conference

More than 400 school cafeteria managers and home economics heads attended the third annual conference of Food Service Directors held in Boston, November 4 and 5. Various phases of food service were discussed by authorities, and additional interest was lent the two-day session by trips made to various schools in and around Boston.

Among those whose names appeared on the program were Dr. Mary de Garmo Bryan, head of institution management, Teachers College, Columbia, and editor of the school feeding section, The NATION'S SCHOOLS; Winning Pendergast, assistant director of the department of school lunchrooms, Detroit; Mary Spalding and Anna A. Kloss of the Massachusetts Departments of Public Health and Education, Boston; Marion P. Rogers, Julia Richman High School, New York City; Mary C. Kelly, cafeteria director, Hartford, Conn., and Mary Farnam, director of school cafeterias, Cleveland Heights, Ohio.

A feature of the meetings was the reports on various research projects. Some of the subjects covered were sanitation and health, records, standardization of service portions, plate dishes and single dishes, insurance, wages and personnel, finance and maintenance and upkeep of kitchen equipment. The meeting was held under the sponsorship of the Massachusetts Dietetic Association and the New England Home Economics Association.

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Palmolive "Measured Soap" is a delight to students – a tremendous saving to you!

NOW, with the Palmolive "Measured Soap" System you can promote "Healthful Cleanliness" *at a cost of only 1-100th of a cent per wash!*

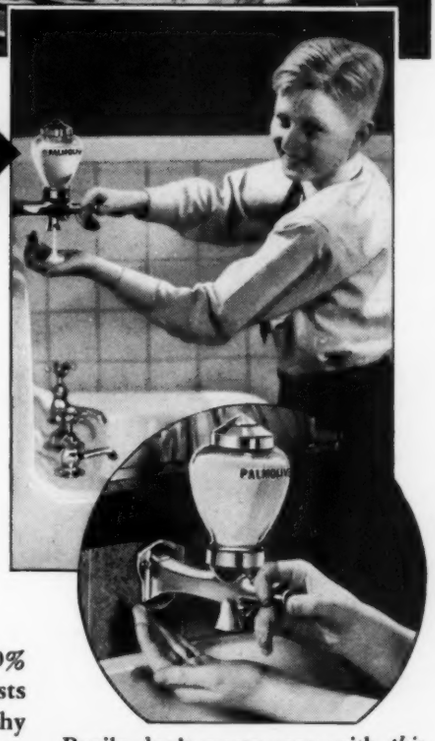
This new system is a model of efficiency. The dispenser never leaks, cakes or corrodes. It can't be drained. Made of sturdy chromium-plated bronze with a large glass reservoir, it automatically delivers a measured quantity of Palmolive Soap with each operation of the plunger.

Pure, Gentle Soap

The soap is the world-famous Palmolive in a special, *dry*, free-flowing form that instantly bursts into a rich, thorough-cleansing lather, in either hard or soft water. And because it is made from a special blend of Olive and Palm Oils, it is always gentle and soothing to the skin.

You Save Money

Best of all, this soap system saves 30% to 40% on washroom soap costs. Tests prove it provides *100 washes for 1¢!* Why not investigate this practical soap system now? Write us for full information. There's no obligation, of course.



Pupils don't waste soap with *this* dispenser! Two pushes of the plunger automatically measure out the right amount of soap for one wash.

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COLGATE-PALMOLIVE-PEET CO. • JERSEY CITY, N. J.

BUILDINGS

School Repair Program

Expenditure of $970,000 by the Chicago board of education before the end of the year for alterations, repairs and other improvements on elementary and high schools was announced recently. The board is continuing the pace it set earlier in the year by the launching of an extensive schedule of new and auxiliary building.

The new work includes roof repairs, interior remodeling, yard improvements, plumbing and electrical work and the installation of lunchroom facilities.

Among the new projects is improvement of the swimming facilities in the Spalding School for Crippled Children. The main feature of this improvement is a device for lowering the crippled children into the water and hoisting them out at the end of exercise periods. These operations have required services of two attendants, and were the source of discomfort to many children.

The new device consists of a trolley system whereby chairs can be slid from the pool rim to positions over the water and then lowered into the pool.

Fire Creates Housing Problem

A housing situation has been created at Slippery Rock State Teachers College, Slippery Rock, Pa., as the result of a $500,000 fire which destroyed old North Hall, women's dormitory. The fire left 167 women students without shelter and with little clothing when they were forced to flee during the early morning hours of Homecoming Day. The fire is believed to have started near the kitchen where an ox was being roasted for the homecoming celebration. The exterior of the dormitory was of brick but the interior was mostly wood.

Reconstruction in Pennsylvania

Eighty thousand Pennsylvania school pupils went back to school in the fall to find shiny new or reconstructed buildings, according to Dr. Hubert C. Eicher, chief of the division of school plants. The building program was financed in part by the PWA. In the majority of projects, both federal grants and loans were approved, while in districts in which local financing was possible, only grants were requested. A total of about $50,000,000 was spent.

"New Fangled"

The Amish farmers of south-central Pennsylvania, who opposed the erection of a township consolidated school and the closing of ten single-room schools, have been assured by Gov. George H. Earle that they will not be required to send their children to the new school and that the one-room schools will be reopened with state funds, if necessary.

For fear that their children would learn "worldly things that might lure them away from the farm," the Amish entered politics and recently elected one of the members of their sect to the school board of the township.

Early in the year the "plain people" of Lancaster County asked the U. S. District Court in Philadelphia for an order to stop construction of the consolidated school building, then about one-third completed.

Will Award Meal Tickets

Hailed as the only high school in the country in which "each diploma carries its own dinner pail," the cornerstone of the Brooklyn High School of Automotive Trades was laid recently with much pomp and ceremony. The $1,100,000 building will be three stories high and will be equipped with both academic classrooms and elaborate shop laboratories.

Eliminate Makeshifts

Nearly 3,000 of Chicago's elementary school pupils who had been occupying portables, basement rooms and other makeshift arrangements were moved into four new elementary school additions and three new elementary schools between November 1 and 10.

PUBLICATIONS

Pictorial

The 1937 report of the superintendent of the Los Angeles school district, "Your Children and Their Schools," which has just appeared, is a pictorial presentation rivaling in magnificence the report of the New York City superintendent, "All the Children." "Your Children" is of Fortune magazine format and size, and its cover is modernistically done in cobalt blue and chartreuse. The editorial text emphasizes the illustrations, dealing with primary, secondary and adult education in both vocational and academic work.

New York Mathematics Syllabus

The New York State Department of Education has issued a new syllabus on "Mathematics for the Elementary Schools," the first since the 1924 publication. The center of emphasis is shifted from computation to the utilization of pupils' experiences as the chief material of instruction, from manipulation to the development of an understanding of concept and from emphasis on drill to mathematical thinking. The material has been designed to help the teacher adapt mathematical instruction to the needs of individual pupils. Pupils may work at different rates of speed and with different material, yet the core is uniform with respect to subject matter and instruction.

The syllabus was prepared by a state committee of twelve teachers, principals and superintendents, advised by a committee of five specialists and finally prepared for publication by Supt. Harris Crandall, Saratoga Springs; Vera Sanford, Oneonta Normal School, and Chairman Ben A. Sueltz, Cortland Normal School, under the general direction of Assistant Commissioner J. Cayce Morrison.

INSTRUCTION

New Approach to Sex Education

Lincoln School, affiliated with Teachers College at Columbia University, which has pupils ranging from three-year-olds in the nursery school through seniors in the high school, has undertaken a new approach to sex education without an official course or program.

The broad social aims of the curriculum take in the "answering of questions about sex in natural fashion as they arise" and a definite avoidance of ever sidetracking a sex issue, according to Dr. Lester Dix, director of the school.

Treating the subject naturalistically, Lincoln School teachers constantly meet with questions in the nursery school from children who are particularly interested in pets and their means of reproduction. Older children are interested more in the story of their own development.

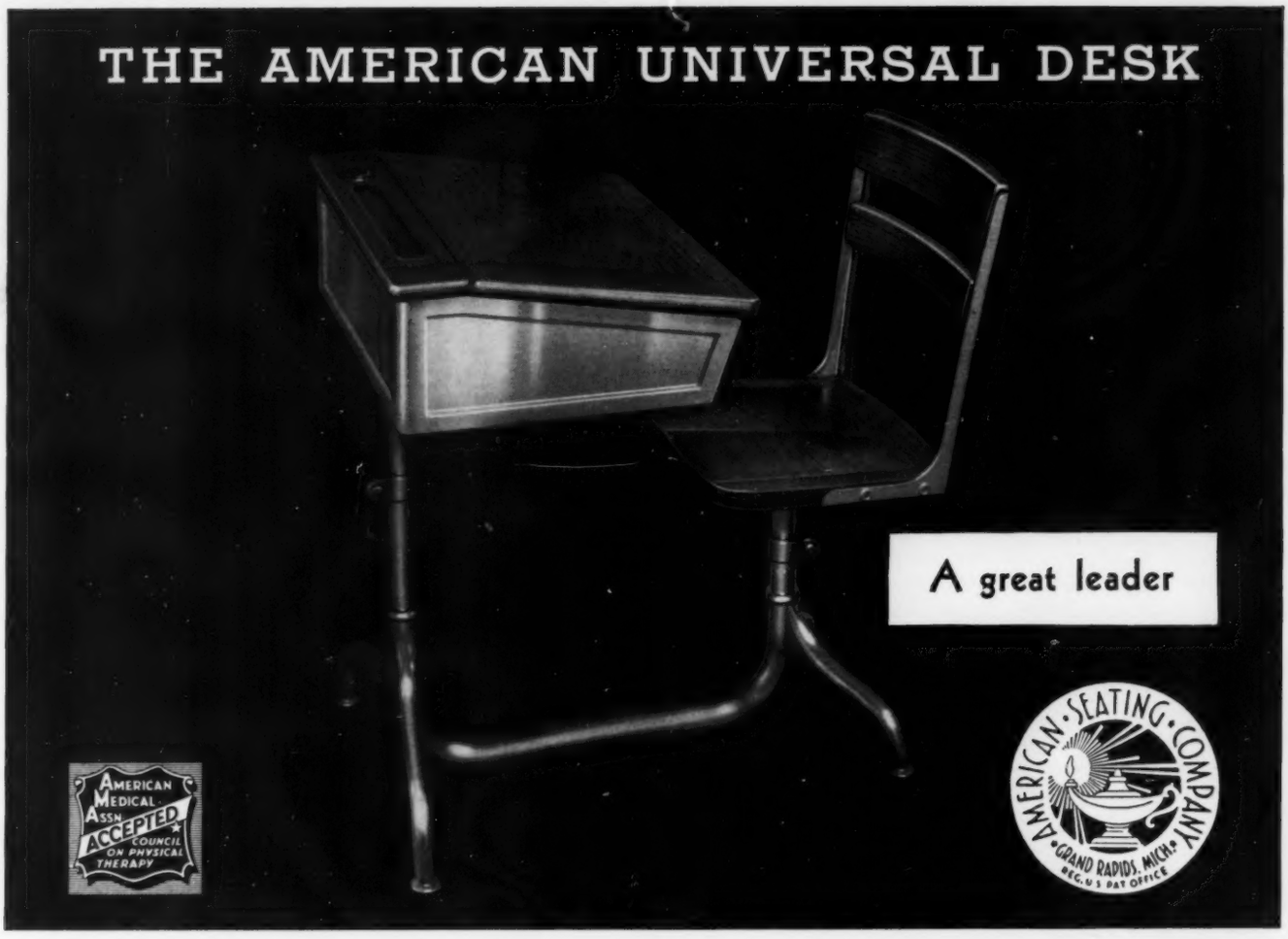
Teachers answer questions put directly with a frank scientific discussion of biologic events. Questions which are put more vaguely and which require an understanding of the basic issues of the sex problem in modern life from the aspect of health and social implication are answered with a view to educating the children to the importance of the subject and the need of adopting a sensible hygienic approach to it.

Reading Clinic

For more than a year teachers of Lawrence, Kan., and vicinity have been bringing backward pupils to Dr. Bert A. Nash's reading clinic at the University of Kansas. Early in November demonstrations of apparatus and methods were presented before the Lawrence section meeting of the Kansas State Teachers convention.

Examinations at Doctor Nash's clinic have revealed that 25 per cent of the cases are due to defective eyesight. The

THE AMERICAN UNIVERSAL DESK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PROMPT care is important in preventing infected wounds. Even minor wounds may become infected when antiseptic treatment is delayed. Children and adults report injuries promptly when Mercurochrome is used, because treatment is not painful.

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is non-irritating and exerts bactericidal and bacteriostatic action in wounds. Be prepared with Mercurochrome for the first aid care of all minor wounds and abrasions. In more serious cases, consult a physician.

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After a thorough investigation of the evidence for and against at the close of the last period of acceptance, the Council on Pharmacy and Chemistry of the American Medical Association again reaccepted (1935)
MERCUROCHROME, H. W. & D.
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other 75 per cent are found to have reading difficulties that are termed psychological.

When the inability to read and comprehend content within a reasonably short time appears to be a matter of habits, the pupil is given training with a reading chart in which a simple tale is told with only parts of a line of type in sight at any one time. A machine, with rhythmical opening and closing shutters, leads the pupil's eye across the line in three regular fixations, then returns it to the left for the next line. Speed of the machine may be varied to the capacity of the subject. Repeated use of the machine has induced improved reading habits.

Paddle System

An Iowa primary teacher has substituted the "paddle system" in the classroom for the traditional practice of having pupils raise their hands for permission to speak or to leave the room.

Industrial arts pupils constructed four wooden paddles, 8 inches by 3 inches, with the words "Speak," "Locker," "Drink" and "Library," painted on them. The paddles are placed in the classroom within easy access of the pupils. When a pupil removes a paddle from its customary place, he may proceed without disturbing the class. This paddle must be returned before a second paddle can be removed.

If the teacher finds that two paddles have been removed, or that the paddles have been used to excess, all the paddles are removed for a short time and the pupils must remain in their seats until the paddles are returned.

This system is said to develop independence in that the pupil learns to organize his work efficiently and remembers to supply himself with necessary materials for his work.

New Junior College

A new junior college was established at Duncan, Okla., this fall with fifty students enrolled. The college holds classes in rooms of the new senior high school building and is supported entirely by a tuition of $100 per student per year.

College Charter Granted

A charter for the proposed college in the heart of an Adirondack forest has been granted by the New York Board of Regents. The new educational institution, to be known as Paul Smith's College of Arts and Sciences, was made possible by a bequest of more than $7,000,000 given by the late Phelps Smith, northern New York utility magnate, in memory of his father, pioneer Adirondack guide and hotel proprietor. It is expected that the coeducational college will be opened in September, 1938.

TRANSPORTATION

Iowa Bus Tragedy

Late in October high school seniors from Renwick, Iowa, were touring the industrial district of Mason City, Iowa. The school bus in which they were riding started across a private crossing of the Rock Island tracks within the yards of a brick plant. A streamlined Rock Island rocket train bound for Minneapolis bore down on the private crossing from between two piles of bricks, crashed into the bus, killed nine occupants and injured nineteen. The dead included the driver of the bus and a man and woman teacher.

Following this tragedy, Agnes Samuelson, state superintendent of public instruction, announced that "certificates of careful driving" will be presented to school bus drivers during the 1937-38 school year.

The bus drivers' certificates, to be awarded next June, will be given to school bus drivers who have gone through the school year without a single accident involving property damage or personal injury.

GIFTS

Former President's Bequest

Roanoke College, Salem, Va., has received a gift of $6,000 from the late Dr. Julius Dreher, a former president of the college. One-half of this amount is for general endowment and the balance for prizes in English for the junior class, to be under the supervision of an English instructor.

Canton's Benefactor

An outright gift of a new technical high school structure, completely equipped, has been made to the board of education of Canton, Ohio, by the Timken Foundation of which H. H. Timken, Canton manufacturer, is president.

The new structure will be known as Timken Technical High School, and will cost approximately $1,000,000 when equipped. It will occupy the site of the present Central High School, which is to be razed as soon as plans for the new structure are completed. The building will include a full basement and three floors, covering a plot of ground, 200 by 200 feet, and will be of reenforced brick and stone construction.

All pupils enrolled in vocational and trade courses in Canton's three other high schools will be transferred to the new unit, which is expected to open for the 1938-39 school year.

A survey made in 1929 established the fact that Canton is an ideal community for vocational education because of its varied industries. Supt. J. H. Mason of Canton's school system spent some time last summer studying programs of vocational schools throughout the country.

School Is Chief Heir

The bulk of the estate of the late James V. Watson, who was engaged in the railway supply business in Chicago during his lifetime, has been left to the Glenwood Manual Training School for normal dependent boys at Glenwood, Ill. Value of the estate was estimated at $140,000.

ADMINISTRATION

Student Court

Proof that pupils in secondary schools are capable of assuming responsibility in conducting many phases of school government is demonstrated in the recent announcement that the National Association of Student Officers now comprises more than 1,000 student councils. These represent a total of more than a half million pupils.

This association for students only was founded in 1930 by Supt. Willis A. Sutton of Atlanta, then president of the National Education Association. The purpose of the group is to serve as a clearing house for exchange of ideas and information among schools carrying on systems of cooperative government. It functions under guidance of the department of secondary school principals of the National Education Association.

PERSONNEL

Washington Tests Teachers

Teachers as well as pupils are being tested through an educational achievement survey in the high schools and secondary schools of the state of Washington. WPA funds totaling $57,216 have been made available for the work, which is under the direction of Prof. August Dvorak of the college of education, University of Washington.

The survey is divided into two projects, one dealing with high school and the other with grade school pupils. The annual cost is approximately 19 cents per pupil.

Teaching deficiencies are detected by comparison of average progress in a par-

ASSURES *Correct Seating* FOR *All* GRADES

THE exceptionally wide range of adjustments on this HEYWOOD-WAKEFIELD ECLIPSE ADJUSTABLE DESK assures correct and comfortable seating for all ages and grades . . . from kindergarten through college. It is a long wearing, rigid unit, with broad bearing surfaces in its construction. The chair shown is of the swivel type which permits pupils to face side blackboards and which assures easy ingress and egress. Many other practical school desks and chairs are available in the Heywood-Wakefield School Furniture Line, any of which we shall be pleased to demonstrate to you in detail.

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ticular study. If one or two pupils fall down, the fault may be ascribed to the pupils. But if nearly all of them fail in the same subject, it must be the fault of the teacher.

Chicago Unions Merge

Four Chicago teachers' unions recently surrendered their charters, formed a single union and accepted a charter as Local No. 1 of the American Federation of Teachers, an affiliate of the American Federation of Labor.

The four-point program for which the new union will work was outlined as follows: (1) restoration of basic salaries in full, since teachers alone of the city's employees have had no appreciable restoration of cuts; (2) proper school conditions for pupils and teachers; (3) properly qualified teachers, and (4) the merit system in the schools.

A little more than a week after the Chicago teachers' organization meeting, the city's teachers were handed a setback when Associate Justice Roberts of the U. S. Supreme Court handed down a decision upholding a decision rendered by the Illinois Supreme Court reducing teachers' retirement annuities.

HEALTH

Traveling X-Ray Unit

To combat tuberculosis among Chicago school children a traveling x-ray unit has been taken from school to school under auspices of the Chicago Tuberculosis Institute and the Municipal Tuberculosis Sanitarium.

The unit consists of a completely equipped x-ray machine capable of taking 400 plates a day, dressing rooms, lead lined dark rooms and bulkhead to protect the operator. An x-ray technician, nurse and chauffeur comprise the crew.

Last year 27,490 school children were given tuberculin tests and the 4,088 who reacted were given x-ray examination, advice and treatment free of charge, according to Dr. Frederick Tice, president of the municipal sanitarium.

RADIO

Broadcasting Conference

The variety of fields in which broadcasting already is recognized as an important educational force is illustrated by the types of organizations which are sponsoring the Second National Conference on Educational Broadcasting, to be held at the Drake Hotel in Chicago, November 29 to December 1.

Included are associations of colleges, museums, libraries, hospitals, credit unions, women's clubs and music clubs; organizations of farmers, workers, lawyers, nurses, scientists, composers, parents, artists, students, city managers and social workers, and groups promoting social security, cooperatives, physical education, conservation, public health, citizenship, recreation and peace.

Approximately 100 organizations have indicated their interest in the conference and are sending official representatives.

The opening day's program will include a general session on the American system of broadcasting, four section meetings, and a second general session on the legal status of broadcasting, with President Walter Dill Scott of Northwestern University presiding. President Robert M. Hutchins of the University of Chicago will preside at a general session the following day, at which an appraisal of educational broadcasting and proposals for improvement will be the theme. There also will be another section meeting series on this day, and on the closing day the third general session will be held.

For Radio Amateurs

Amateur radio groups wishing to broadcast on commercial stations as a means of interesting the public in their work may receive help in preparing smooth, workmanlike scripts for presentation from the Radio Workshop of Ohio State University. A booklet, "Radio Script Duplication," containing examples of continuity and script pages, processes of duplication and giving ad-

On the Air During December

The following programs of particular interest to school people are arranged by the National Broadcasting Company and the Columbia Broadcasting System. The time is Eastern Standard.

Daily

National Farm and Home Hour[1]—1:30-2:30 p.m. (NBC Blue).

Monday

Exits and Entrances, history and current events for junior and senior high school pupils, American School of the Air—2:30 to 3:00 p.m. (CBS).

Explorers' Series, sponsored by the American Museum of Natural History — 6:15-6:30 p.m. (CBS).

All America, dramatizations of American history, U. S. Office of Education—10:30-11:00 p.m. (CBS).

Brave New World, Latin-American program, sponsored by U. S. Office of Education — 10:30-11:00 p.m. (CBS).

Tuesday

Fun in Music, band lessons under direction of Dr. Joseph Maddy—2:00-2:30 p.m. (NBC Red).

American Literature, alternating with music, "Old World Backgrounds," American School of the Air—2:30 to 3:00 p.m. (CBS).

NBC Music Guild, unusual compositions of great composers; guest artists—2:30-3:00 p.m. (Blue).

Stories of Industry, sponsored by the U. S. Department of Commerce—4:30-5:00 p.m. (CBS).
- Dec. 7—Chemicals.
- Dec. 14—Tobacco.
- Dec. 21—Toys.
- Dec. 28—Motion Pictures.

Science Service Series, dramatizing and explaining latest scientific developments—5:15-5:30 p.m. (CBS).

Drama of the Skies—Hayden Planetarium program on astronomy for juveniles and adults — 5:30-5:45 p.m. (CBS).

Wednesday

Hamilton Family, geography, intermediate. American School of the Air—2:30 to 3:00 p.m. (CBS).

Current Questions Before the House, each week a different member of the House of Representatives discusses a current problem—3:30-3:45 p.m. (CBS).

Youth in a Modern Community, sponsored by the radio forum, National Congress of Parents and Teachers — 4:30-5:00 p.m. (NBC Blue).

U. S. Cabinet Series, presenting a different member of the President's cabinet each week—10:30-11:00 p.m. (CBS).

Your Health, supplementary material for health teaching in junior and senior high schools, sponsored by the American Medical Association—2:00-2:30 p.m. (NBC).
- Dec. 1—Tuberculosis, Foe of Youth.
- Dec. 8—It Takes All Good Foods.
- Dec. 15—Milk from Farm to Table.
- Dec. 22—Vitamins, Minerals and Common Sense.
- Dec. 29—Dietary Fads.

Our American Schools, sponsored by the N. E. A. to promote teacher welfare and better support for schools — 6:00-6:15 p.m. (NBC Red).

Thursday

Songs and Folk Tales, American School of the Air—2:30 to 3:00 p.m. (CBS).

Education for Living, sponsored by the General Federation of Women's Clubs — 4:30-5:00 p.m. (NBC Blue).

Current Questions Before the Senate, a member of the Senate is heard each week discussing a current problem—5:00-5:15 p.m. (CBS).

Friday

Vocational Guidance, American School of the Air—2:30 to 2:45 p.m. (CBS).

Science Club of the Air, elementary science. American School of the Air—2:30 to 3:00 p.m. (CBS).

NBC Radio Guild, revivals of plays, new and old, that have had general acceptance—3:00-4:00 p.m. (Blue).

Education in the News, dramatization of news items in education by the U. S. Office of Education—6:00-6:15 p.m. (NBC Red).

Saturday

Our American Schools, sponsored by the N. E. A. to bring home and school in closer cooperation — 11:00-11:15 a.m. (NBC Red).

Cincinnati Conservatory of Music, symphonic and small instrumental recitals of classical and contemporary music — 11:00 a.m.-12:00 noon (CBS).

NBC Concert Hour—8:45-9:30 p.m. (Red).

Sunday

University of Chicago Round Table Discussions—12:30-1:00 p.m. (NBC Red).

New York Philharmonic Symphony Society, with John Barbirolli conducting — 3:00-5:00 p.m. (CBS).

The World Is Yours, thrilling adventures in the world of science by the Smithsonian Institution—4:30-5:00 p.m. (NBC Red).

[1]Except Sunday.

DESKOR CHAIR

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Deskor appreciates the tremendous changes that are taking place in the immediate and future modernization of School Plants, particularly concerning the following problems:

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(b) Elimination of unnecessary "part time" space without sacrifice of capacity.

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(a) Greater utilization of "part time" or "full time" space without necessity of new construction.

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proves itself in 17 HARVARD UNIVERSITY Kitchens

Roy L. Westcott, Manager, Harvard University Dining Service, Harvard University, expresses the satisfaction of an experienced Vulcan user when he writes—

"After many years of constant use, we have come to the conclusion that it would be difficult for us to 'keep house' without Vulvan Equipment."

With practically 100 pieces of Vulcan equipment installed in 17 of Harvard's great buildings, Mr. Westcott's statement is proof indeed of Vulcan performance.

Write for booklet "Cutting Cooking Costs," that tells how modernizing with Vulcan reduces cooking costs 25% to 50%.

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vice on type, paper, color and timing will be sent to leaders of amateur groups on receipt of ten cents to cover mailing costs.

Learning Radio Techniques

Twenty-five juniors and seniors at the University of Maryland are being selected for competitive auditions to study radio speaking, advertising, promotion, television and program planning in a new course being inaugurated by Dr. Ray Ehrensberger, speech professor and specialist of the Columbia Broadcasting System. Columbia technicians have supervised construction of a classroom studio and broadcasting unit on the College Park campus, offering the latest scientific equipment for recording and transmission. Facilities of WJSV will be available as a laboratory for practical work. Platform speaking by means of public address systems is included in the classwork for training the voice. Psychological adjustments for microphone speaking are effected simultaneously.

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SPREAD OF DISEASE! . . . in your washrooms

Bradley Washfountains provide clean, running water.

★ Each student at a Bradley Washfountain gets his own spray of clean, running water with no chance of contamination.

Bradley Group Washing Fixtures at the same time save 70% in water costs and 25% in floor space . . . They eliminate a big part of washroom delay since 10 students can wash at one Bradley (54-inch size) at one time.

Bradley Foot-Fountains also have the central spray head to provide each child with sanitary running water.

Bradley Washfountains and Bradley Multi-Stall Showers are used in hundreds of schools and institutions, providing economical and sanitary washing facilities to thousands of students . . . Similar features are provided by Bradley Foot-Fountains which are also popular for certain types of schools and institutions.

New Catalog Now Ready

In our new Catalog 937, complete description and floor plan suggestions are given. Write for a copy and list of schools using Bradleys. BRADLEY WASHFOUNTAIN CO., 2207 W. Michigan Street, Milwaukee, Wisconsin.

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WASHFOUNTAINS AND SHOWERS

ANNIVERSARIES

Education Anniversaries

Five important educational anniversaries were observed in New York State this year along with American Education Week. The year 1937 marks the 150th anniversary of the reorganization of the University of the State of New York and the admission to it of the first two academies, Erasmus Hall and Clinton Academy; this year also is the 125th anniversary of the establishing of the present common school system; the 100th anniversary of the creation of the first city school superintendency in the United States at Buffalo; the 95th anniversary of the extension of the common school system to New York City, and the 70th anniversary of the free school law.

NAMES IN NEWS

Superintendents

WILLIAM B. APPLETON, principal of the Leominster Senior High School, Leominster, Mass., has been named acting superintendent of schools to succeed the late DR. WILLIAM H. PERRY. Doctor Perry, superintendent of Leominster schools for twenty-three years, died recently at the age of sixty-nine. JOHN H. COBURN, submaster of the senior high school, was appointed acting principal.

H. M. COULTRAP was honored recently at a dinner in recognition of his twenty-five years' service as superintendent of the city schools of Geneva, Ill.

CHARLES L. KOPP, superintendent of schools in Allegany County, Maryland, was elected president of the Maryland State Teachers' Association at the annual meeting of the organization recently.

E. H. CONDIT has resigned as superintendent of schools, Columbia County, Oregon, and has been succeeded by W. B. SCHNEBLY, principal of the John Gumm School, St. Helens, Ore. Mr. Condit has become superintendent of elementary schools at Vernonia, Ore.

W. MAURICE BAKER, retiring superintendent of schools at Olive Hill, Ky., has been succeeded by C. R. LISANBY, Georgetown, Ky.

MRS. J. I. RAY, Fremont, Neb., was appointed superintendent of schools of Dodge County, Nebraska, to complete the term of her husband, who died recently. She has served as acting superintendent for the last fourteen months while her husband was ill.

WADE C. FOWLER, superintendent of schools at Nevada, Mo., will join the

NINE SIZES

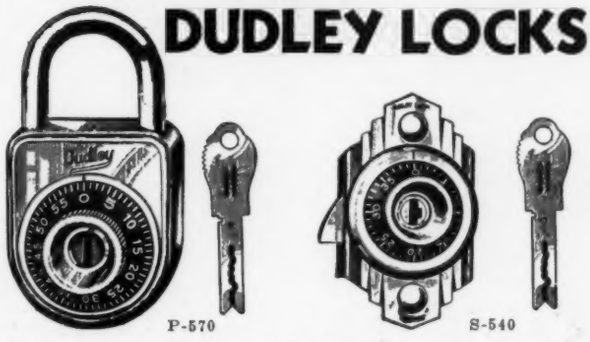
of the FINNELL Electric FLOOR SCRUBBER and POLISHER

Nine different models in the Finnell line of scrubbing machines assure exactly the right system to save money. Have a free demonstration . . . on your floors . . . under actual working conditions. Write

FINNELL SYSTEM, INC.
212 EAST ST., ELKHART, IND.

PLAN A THOROUGH VISIT OF THE EXHIBITS · ATLANTIC CITY · FEB. 26 TO MAR. 3 · ASSOCIATED EXHIBITORS · EDUCATIONAL · THE NATIONAL EXPOSITION OF EDUCATION

PROTECT YOUR LOCKERS WITH THESE DUDLEY LOCKS



Avoid the nuisance of student lost keys—enjoy the convenience of masterkey locker control.

Dudley locks assure positive safety. Every Dudley combination within your installation is different. The masterkeys are of a special design to prevent unauthorized duplication and furthermore, are privately registered to your installation. For a modern, effective working locker system use the Dudley locks shown above.

SCHOOL EXECUTIVES—Write for sample lock for free inspection

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Those who appreciate real value have made this a year appreciated by The Clarin Organization who extend to you the compliments of the season.

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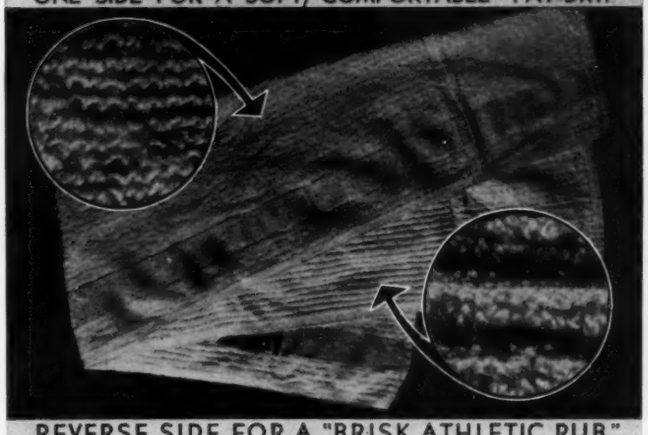
ONE SIDE FOR A SOFT, COMFORTABLE "PAT-DRY."



REVERSE SIDE FOR A "BRISK ATHLETIC RUB."

The New **Super-Turk** IS TWO TOWELS IN ONE!

FOR SCHOOL GYMNASIUM USE

Super-Turk is our newly created towel developed especially for school gymnasium use. It has the heavy construction of the Super-Gym, plus the advantage that one side has a soft face of full terry to permit a comforting "pat-dry" after the brisk athletic rub of the Super-Gym side. The identifying color stripe, either name woven or plain, is on the side of the towel for greater strength down the center. Average minimum life in school use is 400 uses!

SEND FOR FREE PORTFOLIO ON "THE McARTHUR PLAN" THAT CUTS SCHOOL TOWEL COSTS TO A MINIMUM

GEO. McARTHUR & SONS
BARABOO, WISCONSIN

Make this task as painless as possible--

"Let's get it over with!" That expresses the attitude of the normal, active school child toward the matter of cleansing the face and hands.

That's why it is so important to make this task as painless as possible. And that's why so many schools today are installing Ivory Soap Dispensers in the washrooms.

For Ivory Dispensers do help to make face and hand cleansing easier and pleasanter. Partly because of the inviting appearance of the gracefully designed dispenser. But chiefly because the Ivory Soap it delivers has been a familiar friend to millions of children ever since their babyhood.

You'll be agreeably surprised to find how much Ivory Dispensers spruce up school washrooms and how little they cost. For the complete story of Ivory Dispenser service, write for descriptive folder and price list.

Children can't drain the soap from the Ivory Dispensers by holding in the plunger. An accurately measured amount of FLAKED or GRANULATED Ivory Soap is delivered with each push of the plunger—enough for a rich, cleansing lather. Dispenser can be installed on either vertical or horizontal surfaces. Tamper-proof. Low in first cost and in up-keep.

IVORY SOAP DISPENSER

PROCTER & GAMBLE
Industrial Sales Dept. NS
Gwynne Bldg. Cincinnati, Ohio

Missouri State Department of Education, working in the field of school administration.

LYTLE MURRAY WILSON, former principal of Franklin Junior High School, Aliquippa, Pa., has succeeded H. R. VANDERSLICE, who resigned, as acting superintendent of the Aliquippa public school district.

JAMES C. CHERRY, forme. principal of the East Nicolaus High School, East Nicolaus, Calif., has been appointed district superintendent of schools at Sutter, Calif.

Principals

MARY W. MULDOON, principal of the Waverly Junior High School, Waverly, N. Y., has been named to the tenure commission by the executive committee of the New York State Teachers' Association. Miss Muldoon will be the only teachers representative on the board of five created by a recent enactment of the legislature. Two appointees are made by the governor, one by the commissioner of education, one by the school boards' association and one by the teachers' association.

CLARENCE R. ANNIN is the new principal of the Avenal High School, Avenal, Calif., having formerly been principal for four years at San Andreas, Calif.

CLARENCE A. FETTERLY, supervising principal of schools at Rutherford, N. J., for twenty-seven years, will retire next June. Mr. Fetterly has been in the school system for thirty-one years, and reaches the retirement age during the current school year.

RUFUS A. PALM, JR., is the new principal of the Gridley Union High School, Gridley, Calif.

RENA NICHOLS, dean of girls at the Hall Fletcher Junior High School, Asheville, N. C., has been chosen acting principal following the sudden death of C. B. ANDERSON, principal, who died of a heart attack while attending the annual convention of the Western district of the North Carolina Education Association. Mr. Anderson had been principal since 1931, and was fifty-one years of age.

MICHAEL NUGENT, former district superintendent of the elementary schools at Gridley, Calif., is principal of the Greenville High School, Greenville, Calif.

RICHARD A. POMEROY is the new principal at the junior high school, Boise, Idaho.

LOWELL MELL is the new principal of the Mastick School, Alameda, Calif.

A. R. BULLOCK, who has been principal of the Trinity Consolidated School, Trinity, N. C., for five years, has become principal of the Lexington High School, Lexington, N. C. FRANK B. MCLEOD of Greensboro, N. C., has succeeded Mr. Bullock at Trinity.

ARTHUR BLAUERT of Whittier School,

FENESTRA STEEL WINDOWS FOR MODERN SCHOOLS

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Take-About Sanders in over 2500 Schools

. . Save their cost many times over by refinishing desks, seats, tables, cabinets, blackboards, etc., at a few cents each.

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. . Take-About allows more time for instruction by eliminating hand planing, scraping and sanding.

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Durabilt Steel Lockers are renowned, in addition to their economy, for their features of distinctive design and attractive finishes; for their wide range of adaptability; for their sturdiness and modern refinements of construction.

Many desirable and important features have been embodied in our new locker. You should be familiar with all these construction details.

Write for Catalog

A new and up-to-the-minute catalog, ask for No. 5076, describing and illustrating Durabilt Steel Lockers and Cabinets is now ready for mailing. Phone, write or wire for your copy which will be sent immediately to you.

"No better built than Durabilt!"

DURABILT STEEL LOCKER CO.
410 ARNOLD AVE. • AURORA, ILL.

STEEL MOVABLE CHAIR DESK

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Posture
Embodies many of the posture features heretofore included only in the more expensive desks.

Comfort
Provides maximum comfort due to scientific form fitting design and is adjustable to each child.

OTHER EQUIPMENT

Beckley-Cardy also has at your disposal a full line of other furniture, window shades, blackboards, laboratory furniture and general supplies. Over 30 years' experience in rendering satisfaction assures quality and value.

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COMPLETE EQUIPMENT FOR EVERY SCHOOL ACTIVIT

SEES ALL—PLAYS ALL
UNIVERSAL
16 MM
SOUND PROJECTOR

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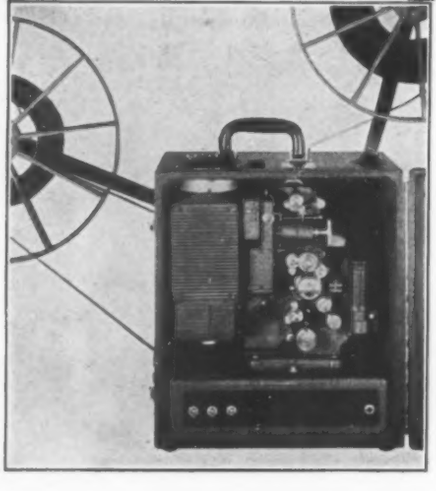
New All-Purpose Model

Now, for the first time, an ALL-PURPOSE 16 MM Sound Projector is offered to you. Completely flexible for the varied demands of classroom and auditorium use. Adjustable as easily and as quickly as your radio to tone quality for small group work but with plenty of built-in reserve power for large audiences. Clear, steady image projected to any desired size. No complicated threading. Easy on film. Requires no trained operator. Handsome modern case design. Can also be used for silent films. A Universal comes to you complete, ready to operate. No extras to buy. May be purchased on the Universal Budget Plan. See your dealer or write for further details to

Universal Sound Projector
Division of
SENTRY SAFETY CONTROL CORP.
1919 Oxford St., Phila., Pa.
Sales office — 1600 Broadway, N. Y. C.



Spokane, Wash., has succeeded the late RUTH MOHNEY as principal of Adams School. H. W. DENMAN of Columbia School has succeeded Mr. Blauert at the Whittier School. GEORGE KLAUSLER of Alcott School has been transferred to Columbia as principal, and LEWIS STEVENS, a teacher at Roosevelt School, has become principal of the Alcott School.

JAMES SNELL, former principal of the Burbank Elementary School, Chico, Calif., has accepted the principalship of the Leggett Valley Union High School, Cummings, Calif.

JOHN EDWARDS, former instructor of biology in Ashland High School, Ashland, Ore., has resigned to accept the principalship of schools at Canyonville, Ore.

H. A. ENGLISH recently was promoted from the vice principalship to the principalship of the Princeton Joint Union High School, Princeton, Calif.

In the Colleges

DR. FRANK W. HART, professor of education at the University of California, who has been a delegate to the Australian New Education Conference, was one of five overseas delegates to be honored recently with a degree of doctor of laws from the University of Melbourne.

PROF. DONALD G. TEWKSBURY, dean of Bard College, men's residential unit of Columbia University, for the last four years has resigned to enter other educational work. DR. HAROLD MESTRE, professor of biophysics at the college, was named to serve as acting dean through the remainder of the school year. Professor Tewksbury's resignation will become effective December 31.

DR. WALTER D. AGNEW has resigned as president of Huntingdon College, Montgomery, Ala., effective at the close of the present school year, and is expected to be succeeded by DR. HUBERT SEARCY, thirty-year-old director of the school of journalism at Birmingham-Southern College. Doctor Searcy has been invited to become Doctor Agnew's successor, but has not as yet accepted.

DR. JAMES HARPER GRIER was installed as the fifth president of the eighty-two-year-old Monmouth College, Monmouth, Ill., on October 28.

DR. JOHN H. DENBIGH, sixty-nine, principal of the Packer College Institute, Brooklyn, N. Y., since 1918, will retire next June.

DR. HARRY KELSO EVERSULL was inaugurated as the ninth president of Marietta College, Marietta, Ohio, on October 20. Doctor Eversull, who is forty-four years old, has been a member of the Congregational Church clergy since 1922.

GEORGE E. DAVIS, for the last sixteen years principal of the Keokuk High School, Keokuk, Iowa, and president of the Iowa State Teachers' Association in 1931, has gone to Purdue University as assistant professor of secondary education.

DR. ORLIE M. CLEM, superintendent of schools at Owego, N. Y., has joined the department of secondary education at New York University.

DR. WILEY G. BROOKS, superintendent of schools at Burlington, Iowa, and president of the Burlington junior college, will become president of Illinois Wesleyan University, at Bloomington, on December 1. He succeeds DR. H. W. MCPHERSON, who resigned last July. Doctor Brooks is the first person not an ordained minister of the Methodist Episcopal Church to be named head of the institution.

DR. W. E. PEIK, professor of education at the University of Minnesota, has been appointed acting dean of the college of education for the year 1937-38, succeeding the late MELVIN E. HAGGERTY.

ROBEN J. MAASKE, formerly deputy state superintendent of public instruction in Oregon, has been appointed professor of education at the University of North Carolina.

Miscellaneous

MRS. JOHANNA LINDLOF, Queens Borough representative on the New York City board of education, who is a retired teacher, has given Queens parents and civic groups an opportunity to tell her what new school buildings and additions they consider necessary for that borough's children. Mrs. Lindlof and an unofficial committee of nine held an open meeting at the school headquarters attended by approximately 100 delegates.

DR. WARREN W. KNOX, acting assistant director of the division of examinations and testing of the New York State Education Department, has been appointed assistant director.

DR. VERNE FRYKLUND, formerly of the University of Minnesota, has become supervisor of industrial education and of teacher training in the division of instruction in the Detroit public schools.

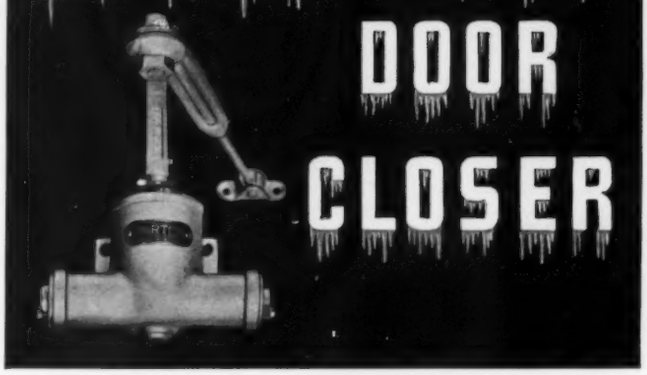
LESTER A. WILCOX, superintendent of schools at Lebanon, Ore., for the last nine years, has joined the Oregon State Department of Education.

Deaths

CORNELIUS A. DAVIS, president of the teachers' association of San Francisco and principal of the Daniel Webster Elementary School, died recently after a lingering illness.

KENNETH M. WHALEY, superintendent of schools, Crawford County, Ohio, died recently in the City Hospital at Bucyrus, Ohio, after a week's illness.

NORTON DOOR CLOSER



WINTER DEMANDS THE NORTON POSITIVE DOOR CONTROL

Due to a special Norton engineering leakproof lubrication feature, the Norton Door Closer can be lubricated properly with mineral oil—assuring the least amount of wear or friction and a smoothly operating door. Norton Door Closers have features of superiority well worth your interest before specifying door closer installations.

At all times the owner is assured of prompt availability of Norton representatives for expert service. Send for Norton Catalog.

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Division of the Yale & Towne Mfg. Co.
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The new 30 Watt output (40 Watts peak) Model 38 Victor Animatophone provides quality reproduction heretofore unknown for 16mm sound.

Unless one speaker is provided for every 15 Watts output, high wattage output means nothing. Victor supplies TWO 12-inch high fidelity speakers. The new, wider reproduction band maintains natural levels of both high and low frequencies. Model 38 produces incomparable fidelity and roundness of tone.

1000 Watt lamp assures ample screen brilliancy for large auditoriums. Microphone or phonograph may be "mixed" with sound from film. Model 38 embodies all exclusive Victor features, including "film protection that really protects." Ask for a demonstration.

SOUND ON FILM VICTOR ANIMATOGRAPH CORP.
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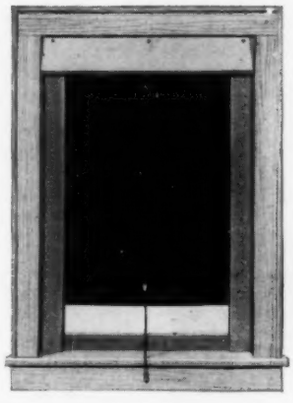

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Highly efficient for laboratory work and motion pictures, Darkening Shades are not expensive if durable material and correct type of installation are selected.

Light excluding shades and translucent shades are used independently and each is built specially for its purpose. Every type window can be satisfactorily equipped including the steel side channels or roller box where necessary.

Write for our catalog and mention Darkening Shades if you wish special information. Address Dept. N. S.

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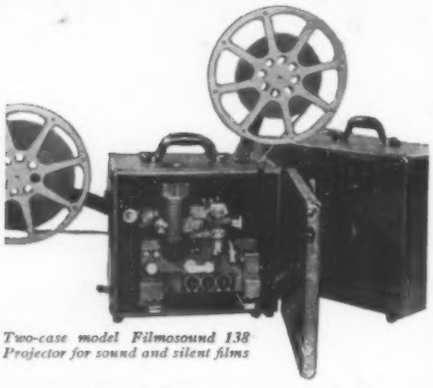
BELL & HOWELL PROJECTORS

meet all requirements proposed by American Council on Education



Two-case model Filmosound 138 Projector for sound and silent films

The American Council on Education, in its recent handbook *Teaching with Motion Pictures*, proposes fourteen questions that should be asked in the selection of school projection equipment. Before you buy projectors for your school, satisfy yourself thoroughly that the machine being considered best meets these fourteen vital requirements.

We believe you will agree, after an examination and demonstration, that Bell & Howell Filmo Projectors, silent and sound, pass the Council's fourteen-point test with the highest honors, and that they possess in addition other features exclusive to Bell & Howell precision-made equipment which make them outstanding values for school service. For only in Filmos will you find:

1. *Positive gear drive* from motor to mechanism.
2. *Projection lamp replaceable* without tools or gloves.
3. *"Metered Lubrication"*—independent of the skill of the operator.
4. *Helical gears* to provide quiet operation and long life.
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6. *Micrometer reflector adjustment* to compensate for lamp filament variations.
7. *Precision construction* of the quality which has made Bell & Howell professional equipment the choice of Hollywood and the other film-producing centers of the world.

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"NEW HORIZONS," a recently published booklet, will familiarize you thoroughly with the new teaching tool, the educational motion picture . . . with its nature, its applications, its values, the technique of using it effectively, and the experiences of educators who are using it. Send the coupon for your free copy. Bell & Howell Company, Chicago, New York, Hollywood, London. *Established 1907.*

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School.....
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City.....*State*.....

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BELL & HOWELL

HOWARD AUSTIN MCLELLAN, for the last nine years principal of the Southwest Harbor High School, Southwest Harbor, Me., died recently of burns received from a kerosene explosion in his home.

D. C. BUTLER, thirty-six, principal of Fairview High School, Fairview, N. C., died of burns received from a kerosene explosion recently in his home.

WILLIAM G. RUSSELL, principal of the manual training high school, Peoria, Ill., since 1921, died recently of heart attack.

VISUAL EDUCATION

French Prizes

A contest for French pupils in American high schools and students in American colleges and universities is being sponsored by the French Motion Picture Corporation, 130 West Forty-Sixth Street, New York City. There will be two prizes consisting of trips to Paris and return aboard the French Line and a week's stay in Paris as the guests of the French Motion Picture Corporation. Each contestant is required to send in his selection of the English counterpart to the French idioms listed in a booklet issued by the corporation entitled, "Do Motion Pictures Teach French?" The contest closes May 15, 1938.

Servant of the Soil

A graphic story of the steel industry is told in a new sound motion picture just released by the Republic Steel Corporation through its agricultural extension bureau on the production and erection of modern woven wire fences. The picture requires forty-five minutes of running time and is entitled "Steel, Servant of the Soil." The film reveals a commonly accepted version of the discovery of iron and shows primitive methods of iron making, and contrasts modern power farming with methods of the days of ox teams.

New Oriental Films

As a background for understanding current history as it is being made in the Far East, the division of visual experiment of the Harmon Foundation has developed a group of 16-mm. silent films on the peoples of China, Japan and Korea. These unusual films may be rented for classroom use from the Harmon Foundation, Inc., 140 Nassau Street, New York City.

Films for the School Screen

Biology VI—Insects

Friendly Flies—Two species, the Hoverer fly, which destroys the common black fly, and the Drone fly, which helps clean up our gardens, 1 reel. 16 mm., sound. For rent or for purchase. Walter O. Gutlohn, Inc., 35 West Forty-Fifth Street, New York City.

How the Mosquito Spreads Disease—Life history of the mosquito; malaria parasite and its cycle in the mosquito and in human blood; prevention of malaria and yellow fever. 1 reel. 16 and 35 mm., silent. For rent. University of Missouri Visual Education Service, 23 Jesse Hall, Columbia, Mo.

Termites—Partial life history of termites is illustrated by subterranean termites (Reticulitermes), rotten-wood termites (Termopsis), and sound-wood termites (Kalotermes). A few of the many protective measures against these insects are shown. 1 reel. 16 mm., silent. For rent or for purchase. Eastman Kodak Company, Teaching Films Division, Rochester, N. Y.

Spiders—Structure, development and habits. 1 reel. 16 mm., silent. For rent or for purchase. Eastman Kodak Company, Teaching Films Division, Rochester, N. Y.

Beneath Our Feet—The daily life of the tiny world that crawls beneath our feet. Through the magnifying lens we see the bee on its honey collecting tour and the ant in its busy community. 10 minutes. 16 mm., sound. For rent. Bell and Howell Company, 1801 Larchmont Avenue, Chicago.

Butterflies—Illustrates the complete life history of the cabbage butterfly and the swallowtail butterfly with their different characteristics and habits, including their rôle in nature of aiding in the cross-fertilization of flowers. 10 minutes. 16 and 35 mm., sound. For purchase. Erpi Picture Consultants, Inc., 250 West Fifty-Seventh Street, New York City.

Grasshopper—Study of their tiny city; close-ups of male, female and worker; hatching of larvae; methods of feeding. 1 reel. 16 mm., silent. For rent. Edited Pictures System, 330 West Forty-Second Street, New York City.

Moths—A large silk moth and the white masked tussock moth are followed through their life histories. The silk moth caterpillar is shown at work on the construction of its unusual cocoon. The secluded life of the female tussock moth is revealed. Attention is called to their economic importance. 10 minutes. 16 and 35 mm., sound. For purchase. Erpi Picture Consultants, Inc., 250 West Fifty-Seventh Street, New York City.

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Turner & Harrison Pens are steadily gaining in acceptance with the schools because—they are being tested and found good, they are being used and proven uniformly good and they have been consistently priced right.

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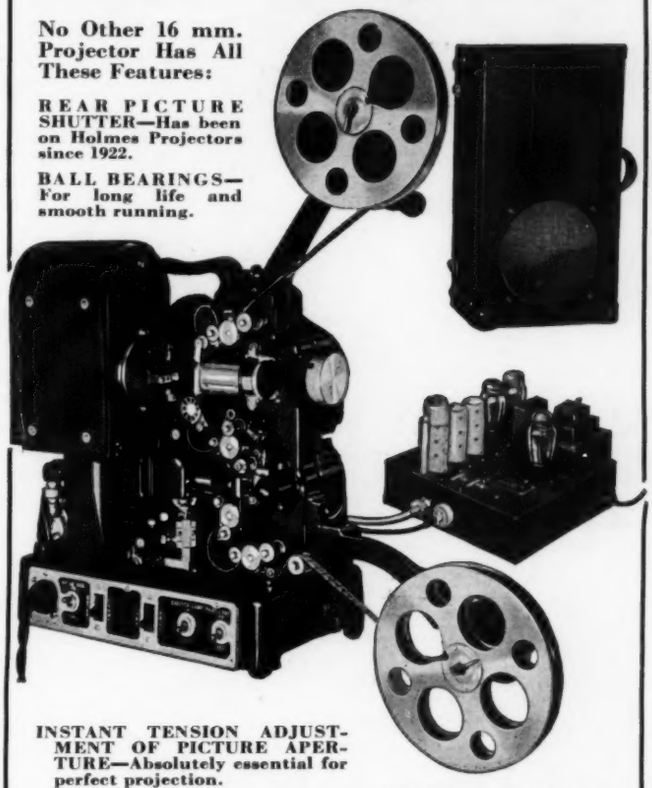
No Other 16 mm. Projector Has All These Features:

REAR PICTURE SHUTTER—Has been on Holmes Projectors since 1922.

BALL BEARINGS—For long life and smooth running.



INSTANT TENSION ADJUSTMENT OF PICTURE APERTURE—Absolutely essential for perfect projection.

DECIMITTENT SPROCKET MOVEMENT—No claw.

ALL SPROCKET—Insures maximum film life.

ALL SHAFT DRIVEN—No belts or chains.

STRAIGHT SOUND APERTURE—No sound drum.

DIRECT BEAM OF LIGHT ON SOUND TRACK AND PHOTO CELL—No prism or reflected light.

HOLD BACK SPROCKET—Absolutely essential for perfect sound.

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HIGH FIDELITY SOUND LENS.

EXCITER UNIT—Adjustable in six directions.

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DYNAMIC SPEAKER—With 12 inch cone.

AMPLIFIER—15 Watts Output.

REELS—400 to 1600 feet.

WEIGHT—Complete equipment approximately 70 pounds.

This 16 mm. projector with a HOLMES ARC LAMP instead of the MAZDA shown was used to throw a 24-foot picture 144 feet for a National Institution at Constitution Hall, Washington, D. C.

HOLMES SMALL PAYMENT PLAN MAKES PURCHASE EASY — ASK FOR CATALOG — FREE DEMONSTRATION.

HOLMES PROJECTOR COMPANY

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ORDINANCE passed in a mid-western town requires that any animal on the street at night "shall prominently display a red tail light." This is NOT a case study from the new ELEMENTS OF BUSINESS LAW (Levine and Mandel); yet you'll find much of interest in this "law text for the millions." Text, workbooks, and teacher's manual now ready.

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THE BOOKSHELF • • • •

CHINA QUEST. *By Elizabeth Foreman Lewis. Illustrated by Kurt Wiese. Philadelphia: The John C. Winston Company,* 1937. *Pp.* ix+301. $2.

Of this book, Tsu-ying Hu, a graduate student, says: "This story brings up vividly the factor of human sympathy as a foundation to mutual understanding and a keynote to obliterate racial prejudice. It also suggests that true friendship, if it could ever exist, has no boundaries either of national pride or of class limitations. The side part of the story depicts some important changes and progress that have taken place in China during the last few years. The author should be credited with a thorough understanding and knowledge of Chinese thoughts and traditions." This book should be recommended as a good supplementary reader both to American children and to Chinese youths as a means of furthering mutual understanding between the two peoples.

BEYOND NORMAL RECOGNITION. *By John F. Thomas. Boston: Bruce Humphries, Inc.,* 1937. *Pp.* xiii+319. $3.50.

An interesting research that results in a conclusion that there are means of securing information of past and future events that are beyond normal means by a well-known and practical-minded educator. The work has been painstakingly done and does not err on the side of assumptive generalization. Recommended for reading to those who believe in something more than a mechanistic interpretation of life.

INTEGRATION — ITS MEANING AND APPLICATION. *By L. Thomas Hopkins and Others. New York: D. Appleton-Century Company, Inc.,* 1937. *Pp.* xiii+315. $2.

Everyone seems to be talking about it but this is an honest attempt to tell what it's all about. A valuable interpretative contribution toward clarifying a professional as well as popular haziness.

HOUSING OFFICIALS' YEARBOOK, 1937. *Edited by Coleman Woodbury. (National Association of Housing Officials). Chicago: Public Administration Service,* 1937. *Pp.* viii+213. $3.

Summary review of significant developments in the various aspects of housing activity.

AMERICAN SECONDARY EDUCATION. *By E. D. Grizzell. Nelson Education Series. New York: Thomas Nelson and Sons,* 1937. *Pp.* 312. $2.

An approach to secondary education with specific emphasis on personnel problems in the school.

SHADOW ON THE LAND: SYPHILIS. *By Thomas Parran, M.D. New York: Reynal & Hitchcock,* 1937. *Pp.* viii+309. $2.50.

One out of every ten adults in our population has syphilis; yet it's curable if public opinion will only insist on its control and progressive eradication. Doctor Parran in simple, convincing style tells of conditions in the United States and what other countries have done through intelligent health measures. Every teacher should read it thoughtfully.

ADVENTURING IN EDUCATION. *By Paul H. Hanus. Cambridge, Mass.: Harvard University Press,* 1937. *Pp* viii+259. $2.

An autobiography of a distinguished educational leader who attempts also to combine with his life story some interpretation of the history of education during that period.

INSTITUTIONAL TEACHER PLACEMENT. *Edited by J. G. Umstattd. Prepared under the auspices of The National Institutional Teacher Placement Association. Detroit: The Editor, Institutional Teacher Placement, College of Education, Wayne University,* 1937. *Pp.* vii+238. $2.50.

Compilation of practices and trends in institutional placement bureaus.

TEACHING ABOUT VOCATIONAL LIFE. *By Mildred E. Lincoln. Scranton: International Textbook Company,* 1937. *Pp.* xiv+617. $4.50.

Valuable descriptive and suggestive material for one phase of the general guidance problem.

SECONDARY EDUCATION FOR YOUTH IN MODERN AMERICA. *By Harl R. Douglass. Washington: American Council on Education,* 1937. *Pp.* x+137. $1.

Sensible report on current problems in secondary education; a report to the American Youth Commission of the American Council on Education.

DIRECTING STUDY ACTIVITIES IN SECONDARY SCHOOLS. *By William G. Brink. Garden City: Doubleday, Doran and Company, Inc.,* 1937. *Pp.* xiii+738. $3.

Basal text for general methods courses in teacher training, in conformity with the more advanced philosophical trends in method.

A COLLEGE LOOKS AT ITS PROGRAM. *By the Muskingum College Faculty. New Concord, Ohio: Muskingum College,* 1937. *Pp.* x+326.

Something unusual; a college actually studies its internal instructional program to see whether improvement is possible.

The man who can make hard things easy is the educator,

EMERSON, Journals

Fortunately, modern teachers in the art of handwriting have the benefit of Esterbrook's 78 years experience in manufacturing pens to fit students' needs.

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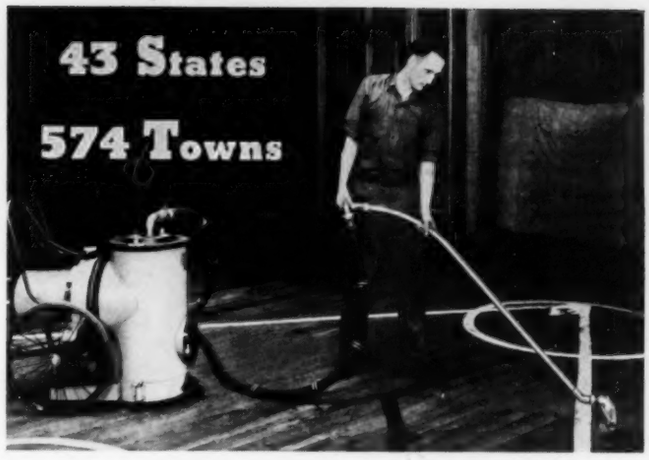

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Old Madrid P. 127

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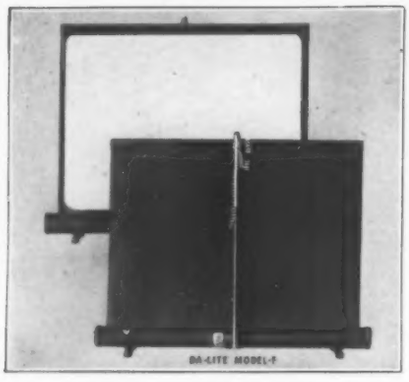

Da-Lite Model F Mounted in a metal case with pivoting, rubber tipped feet. 6 sizes, 22" by 30" to 52" by 72" inclusive. From $12.00 up.

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Where projection screens must be carried from classroom to classroom, the convenient operation of Da-Lite portable Screens is especially appreciated. The Model F in metal case (shown above), the New Deal in handsome leatherette-covered box and the popular Challenger (shown below) have a telescoping rear support that locks automatically in place when extended.

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MERRY MIXER COOK BOOK. *By Helen Robertson. New York: Frederick A. Stokes Company,* 1937. 1,058 *Recipes.* $2.50.

The subtitle, Successful Methods and Recipes for Beginners, is fully justified in the text. The variety of recipes is not too elaborate or complicated, making this book particularly valuable for the class in school cookery.

Just Off the Press

A SENIOR HIGH SCHOOL GRAMMAR. *A Reference for All Teachers and All Adults Interested in a Better Understanding of the English Language and Its Most Acceptable Usage. By Ida Emelia Huglin. Philadelphia: Dorrance and Company,* 1937. *Pp.* 295. $1.13.

ELECTRICAL OCCUPATIONS FOR BOYS. *By Lee M. Klinefelter. Illustrated. New York: E. P. Dutton and Company, Inc.,* 1937. *Pp.* 227. $2.

JUNIOR CLOTHING. *By Kate W. Kinyon and L. Thomas Hopkins. Drawings by C. E. B. Bernard. Revised. New York: Benj. H. Sanborn and Company,* 1937. *Pp.* vii+264.

A FIRST COURSE IN EDUCATION. *By Ward G. Reeder. New York: The Macmillan Company,* 1937. *Pp.* xvi+720. $2.75.

CARING FOR THE RUN-ABOUT CHILD. *Constructive Guidance for the Active, Explorative Two-to-Six-Year-Old. By Rhoda W. Bacmeister. Photographs by Tom Maley. New York: E. P. Dutton and Company, Inc.,* 1937. *Pp.* 263. $2.50.

HIGH SCHOOL TEACHERS' METHODS. *By Charles Elmer Holley. Champaign, Ill.: The Garrard Press,* 1937. *Pp.* vii+514.

FOUR YEARS OF NETWORK BROADCASTING. *Report by the Committee on Civic Education by Radio of the National Advisory Council on Radio in Education and the American Political Science Association. Chicago: The University of Chicago Press,* 1937. *Pp.* v+78. $0.25. *(Paper Cover).*

WHAT SHALL WE READ ABOUT THE MOVIES? *By William Lewin, Chairman, Motion Picture Committee, Department of Secondary Education, National Education Association. Newark, N. J.: Educational and Recreational Guides, Inc., (138 Washington Street),* 1937. *Mimeographed. (Paper Cover).*

FUNDAMENTALS IN MECHANICAL DRAWING. *By M. F. Foss. Harrisburg: Stackpole Sons,* 1937. *Pp.* 85. $0.52 *(Paper Cover).*

SEBASTIAN BACH: THE BOY FROM THURINGIA. *By Opal Wheeler and Sybil Deucher. Illustrations by Mary Greenwalt. New York: E. P. Dutton and Company, Inc.,* 1937. *Pp.* 126. $2.

HOUSEHOLD MECHANICS. *By Earl L. Bedell and Ernest G. Gardner. First Edition. Scranton, Pa.: International Textbook Company,* 1937. *Pp.* 130. $1.25. *(Paper Cover).*

THE STRANGE ADVENTURES OF MYRTLE THE TURTLE. *By Robert Ross Parker. Illustrated by Alice Lois Evans. New York: E. P. Dutton and Company, Inc.,* 1937. *Pp.* 44. $1.

STATISTICS IN EDUCATION AND PSYCHOLOGY. *A Combined Handbook and Textbook. By Elmer R. Enlow. New York: Prentice-Hall, Inc.,* 1937. *Pp.* ix+180. $2.75.

ESSENTIALS OF DEBATE. *By John R. Pelsma. New York: Thomas Y. Crowell Company,* 1937. *Pp.* ix+168. $1.

LEARNING TO READ MECHANICAL DRAWINGS. *A Wordbook for Beginners. By Roy A. Bartholomew and F. S. Orr. Peoria, Ill.: The Manual Arts Press,* 1937. *Pp.* 48. $0.40 *(Paper Cover).*

THE CHANGING CURRICULUM. *By the Joint Committee on Curriculum of the Department of Supervisors and Directors of Instruction, and the Society for Curriculum Study. Henry Harap, Chairman. New York: D. Appleton-Century Company, Inc.,* 1937. *Pp.* xi+351. $2.

PUPIL'S WORKBOOK OF DIRECTED STUDY. *To Accompany "Changing Governments and Changing Cultures." By Harold Rugg and James E. Mendenhall. Boston: Ginn and Company,* 1937. *Pp.* xvii+91. $0.40 *(Paper Cover).*

STUDENTS' OBJECTIVE-TEST MANUAL. *To Accompany Muzzey's "A History of Our Country." By Howard C. Perkins. Boston: Ginn and Company,* 1937. *Pp.* 328. $1 *(Paper Cover).*

A GUIDE FOR SELF-APPRAISAL OF SCHOOL SYSTEMS. *By Paul R. Mort and Francis G. Cornell. New York: Bureau of Publications, Teachers College, Columbia University,* 1937. *Pp.* v+65 *(Paper Cover).*

PUPIL'S WORKBOOK OF DIRECTED STUDY. *To Accompany "The Conquest of America." By Harold Rugg and James E. Mendenhall. Boston: Ginn and Company,* 1937. *Pp.* xvi+64. $0.40 *(Paper Cover).*

JUNIOR FOODS. *Revised. By Kate W. Kinyon and L. Thomas Hopkins. Illustrated by C. E. B. Bernard. Chicago: Benj. H. Sanborn and Company,* 1937. *Pp.* x+362. $1.16.

SOUTHERN LANDS. *By Harlan H. Barrows, Edith Putnam Parker and Margaret Terrell Parker. New York: Silver Burdett Company,* 1937. *Pp.* viii+296. $1.52.

YOUTH AT THE WHEEL. *By John J. Floherty. Illustrated. Philadelphia: J. B. Lippincott,* 1937. *Pp.* 168. $1.75.

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The timing mechanism is an integral part of the gear reduction unit. An electric brake insures the screen stopping in the same position each time, which eliminates the need for refocusing the projector. No slippage can occur. One switch provides full control of the screen for all operations.

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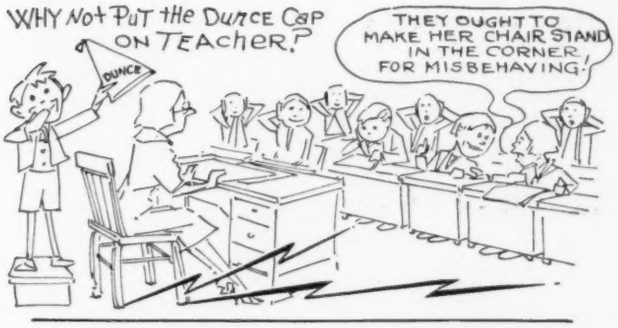

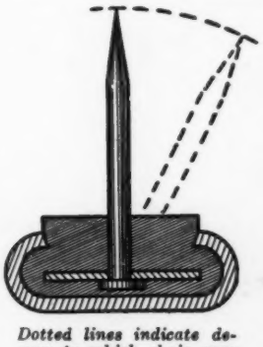

Dotted lines indicate degree to which chair may be tilted while glide remains flat on the floor. The rubber cushion absorbs all noise, and washer prevents nail from pulling out.

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Do your pupils look up from their studies every time you move your chair? Is the noise in your schoolroom preventing good grades? If so, it is time to equip all chairs and movable furniture with

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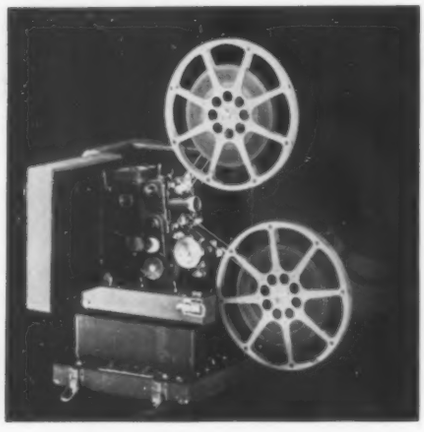

New Model Amprosound

For auditorium seating up to 3000, this new model "L" 16 mm. Sound-on-Film Amprosound delivers clear, rich undistorted tone and theatre-quality brilliant illumination. Remarkably flexible. When projector is being used for silent films, the accompanying amplifier and Speaker may be used separately to provide microphone talk and entertainment. Entirely portable—two compact cases contain everything.

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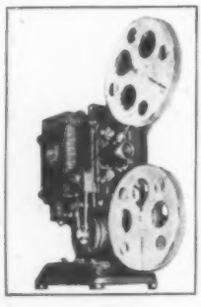

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We got to talking to a young superintendent the other day who claims that he has floor troubles in his school licked to a finish. Ordinarily we would presume to doubt all such enthusiastic outbursts, but the evidence underfoot was overwhelming. No visible sign of a hard day's traffic showed on the glossy rubber tile floor so we glanced down the hall, noting that the terrazzo floor bore no marks. In the library the linoleum floor glowed warmly and in the classrooms the maple floors retained their original gloss.

"We called in the Finnell man," said the superintendent, observing our bewilderment. "It was only a few hours until the janitor had learned to apply finishes with their floor machine that keep our floors polished but unmarked. You should see how this machine keeps our gymnasium free from scratches or rubber burns. We find that the Finnell System, Incorporated, located at Elkhart, Ind., can supply us with everything from floor machines to sealers, waxes and soap."

Specialized Service

You have to specialize these days to get anywhere at all. There is, for instance, a firm prepared to give (and we mean give) expert advice and consultation service on layout plans and installation pertaining to public address and single or two-way communication systems. Herman A. DeVry, Incorporated, Chicago, is the originator of this special centralized system department and has placed J. R. Cowan at the disposal of schoolmen. We find this a splendid idea, too, with superintendents and principals badgered with all sorts of adoptions and integrations by day and extracurricular activities by night. But it is when you really have a problem that this consulting service gets into its stride and shows its mettle.

Two in One

Now that the cinema has become a teaching device in good standing, school executives are sending reconnoitering parties out to discover the best film projectors. Anticipating the need for a projector adequate for large assembly halls and knowing that such a machine will have to stand up under hard wear, the Ampro Corporation of Chicago has designed its Model "L" to do these two things and ever so many more.

The machine is portable and built into two carrying cases, the projector in one and the amplifier and speaker in the other. When in position the projector rests on the amplifier and may be operated either open or closed, depending upon the acoustics of the room. Another feature that will endear it to schoolmen: it is so designed that when it is being used for silent films, the accompanying speaker may be used separately to provide entertainment, which to us is as good as two machines.

For the convenience of inexperienced operators all operating controls of the projector and amplifier are centralized and mounted on two panels, both of them illuminated. Swiveled arms can embrace 1,600 feet of film at a time and the automatic rewind can handle the same amount and wrap it neatly in less than a minute.

Associated Exhibitors

If our statistics can be relied on there are going to be fully fifty thousand of these little insignia peering up at schoolmen from advertisements between now and February. They will serve as a reminder and as a guarantee to school officials that these manufacturers have been approved and that their products will be displayed in the exhibit at the convention of the National Association of School Administrators in Atlantic City. That lively organization, the Associated Exhibitors, believes in advertising its show and is proud of the quality of its products.

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We maintain that what constitutes the real handicap in the school cafeteria is lack of balancing ability. Personally, we have never been able to master the art of reaching here and there for plates, cups and saucers while keeping our tray on an even keel on the cafeteria rail. It was with great satisfaction, therefore, that we pounced upon the automatic "platerak" and "cuprak" and saucer dispenser devised by the Lowerator Manufacturing Company (Brooklyn, N. Y.), which holds that gymnastics have no place in the cafeteria. These dispensers are built of stainless steel and will hold up to twelve dozen plates and 200 cups and saucers, thus leaving us more room.

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provides complete facilities for the distribution of radio, phonograph and microphone programs to any number of rooms. The latest developments in sound engineering are incorporated in these systems which are available for all types of educational buildings from the smallest rural school to the largest institution.

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Used by all Leading American School Furniture Manufacturers.

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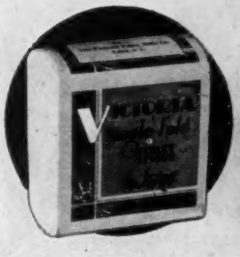

Victoria TOILET TISSUES

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